

36

**STANDING COMMITTEE ON AGRICULTURE
(2016-2017)**

SIXTEENTH LOK SABHA

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION)**

**DEMANDS FOR GRANTS
(2017-18)**

THIRTY-SIXTH REPORT



**LOK SABHA SECRETARIAT
NEW DELHI**

MARCH, 2017/PHALGUNA, 1938 (Saka)

THIRTY-SIXTH REPORT

**STANDING COMMITTEE ON AGRICULTURE
(2016-2017)**

(SIXTEENTH LOK SABHA)

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE
(DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION)**

**DEMANDS FOR GRANTS
(2017-18)**

Presented to Lok Sabha on : 10.03.2017
Laid on the Table of Rajya Sabha on : 10.03.2017



**LOK SABHA SECRETARIAT
NEW DELHI**

MARCH, 2017 / PHALGUNA, 1938 (Saka)

COA No.

Price : Rs.

© 2017 By Lok Sabha Secretariat

Published under Rule 382 of the Rules of Procedure and Conduct of Business in Lok Sabha (Fourteenth Edition) and Printed by

CONTENTS

COMPOSITION OF THE COMMITTEE	PAGE NO.
INTRODUCTION	iii
ABBREVIATIONS	v
	vi

PART-I

CHAPTER I

ANALYSIS OF DEMANDS

- (1) Introductory
- (2) Analysis of Demand
- (3) Budgetary Allocations- Twelfth Plan
- (4) Funds Surrendered
- (5) Supplementary DFGs
- (6) Re-appropriation of Funds
- (7) Financial Irregularities
- (8) Budget and cash management scheme
- (9) Revenue Receipt
- (10) Planning in the era of NITI Aayog

CHAPTER-II

SECTORAL PROGRAMME

- (1) Crop Sciences Division
- (2) Horticulture Science Division
- (3) Natural resource management Division including NICRA
- (4) Animal Science Division
- (5) Fisheries Science Division
- (6) Agricultural Engineering Division
- (7) Agricultural Extension Division
- (8) Agricultural Education Division

Part- II

Recommendations/Observations of the Committee

***Annexure**

- (1) Surrender of Savings in respect of Demand No.2 - Agricultural Research and Education, for the year 2015-16
- (2) First Batch of Token Supplementary Demands for Grants (2015-16) in respect of Demand No.2- DARE
- (3) Re-appropriation of funds of Rs. 60,50,39 thousands from Plan/Revenue/Voted to Plan/Revenue/Vote under Demands no.2- DARE during 2015-16
- (4) Theme-Wise Scheme-Wise Goals/Targets of Institute under ICAR for the year 2017-18
- (5) Details on Technologies Developed at Institutes during XII plan period

Appendices

- (1) Minutes of 11th Sitting of the Committee held on 16-02-2017
- (2) Extracts of Minutes of 15th Sitting of the Committee held on 09-03-2017

***This matter will be uploaded later on.**

COMPOSITION OF THE STANDING COMMITTEE ON AGRICULTURE (2016-17)

Shri Hukm Deo Narayan Yadav - Chairperson

MEMBERS

LOK SABHA

2. Prof. Ravindra Vishwanath Gaikwad
3. Shri Sanganna Karadi
4. Shri Nalin Kumar Kateel
5. Smt. Raksha Khadse
6. Md. Badaruddoza Khan
7. Shri C. Mahendran
8. Dr. Tapas Mandal
9. Shri Janardan Mishra
10. Shri Devji Patel
11. Shri Nityanand Rai
12. Shri Mukesh Rajput
13. Shri Neiphu Rio
14. Shri Konakalla Narayana Rao
15. Shri C.L. Ruala
16. Shri Arjun Charan Sethi
17. Shri Satyapal Singh (Sambhal)
18. Shri Virendra Singh
19. Shri Dharmendra Yadav
20. Shri Jai Prakash Narayan Yadav
21. Shri B. S. Yeddyurappa

RAJYA SABHA

22. Shri Sambhaji Shahu Chhatrapati
23. Sardar Sukhdev Singh Dhindsa
24. Shri Janardan Dwivedi
25. Shri Meghraj Jain
26. Shri Vinay Katiyar
27. Shri Mohd. Ali Khan
28. Shri Ram Nath Thakur
29. Shri R. Vaithilingam
30. Shri Shankarbhai N. Vegad
31. Shri Darshan Singh Yadav

(iii)

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Shri U.B.S. Negi | - | Joint Secretary |
| 2. | Shri Arun K. Kaushik | - | Director |
| 3. | Smt. Juby Amar | - | Additional Director |
| 4. | Shri Sumesh Kumar | - | Under Secretary |

INTRODUCTION

I, the Chairperson, Standing Committee on Agriculture, having been authorized by the Committee to submit the Report on their behalf, present this Thirty-sixth Report on the Demands for Grants (2017-2018) of the Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education).

2. The Committee under Rule 331E(1)(a) of the Rules of Procedure considered the Demands for Grants (2016-17) of the Department of Agricultural Research and Education, which were laid on the table of the House on 09 February, 2017. The Committee took evidence of the representatives of the Department of Agricultural Research and Education at their Sitting held on 16 February, 2017. The Report was considered and adopted by the Committee at their Sitting held on 09 March, 2017.

3. For facility of reference and convenience, the Recommendations/Observations of the Committee have been printed in bold letters in Part-II of the Report.

4. The Committee wish to express their thanks to the officers of Department of Agricultural Research and Education for appearing before the Committee and furnishing the information that they desired in connection with the examination of Demands for Grants of the Department.

5. The Committee would also like to place on record their deep sense of appreciation for the invaluable assistance rendered to them by the officials of Lok Sabha Secretariat attached to the Committee.

NEW DELHI;
09 March, 2017
18 Phalgun, 1938 (Saka)

HUKM DEO NARAYAN YADAV
Chairperson,
Standing Committee on Agriculture

(v)

ABBREVIATIONS

AE	Advance Estimates
AICRN	All India Coordinated Research Network
AICRP	All India Coordinated Research Project
AINP	All India Network Project
ARYA	Attracting and Retaining Youth in Agriculture
BE	Budget Estimates
CAU	Central Agricultural University
C&AG	Comptroller and Auditor General
CIAE	Central Institute of Agricultural Engineering
CIFE	Central Institute of Fisheries Education
CIRCOT	Central Institute of Research on Cotton Technology
CSR	Corporate Social Responsibility
DARE	Department Agricultural of Research and Education
DBT	Direct Benefit Transfer
DKMA	Directorate of Knowledge Management in Agriculture
ESA	Ergonomics and Safety in Agriculture
FYP	Five Year Plan
FFC	Fourteenth Finance Commission
FIM	Farm Implements and Machinery
FLD	Front Line Demonstrations
GDP	Gross Domestic Product
HYPM	Half Yearly Progress Monitoring
HRD	Human Resource Development
IARI	Indian Agriculture Research Institute
ICAR	Indian Council of Agricultural Reserarch
IIHR	Indian Institute of Horticulture Research
IIMR	Indian Institute of Maize Research
IIVR	Indian Institute of Vegetable Research

(vi)

IWBR	Indian Institute for Wheat and Barley Research
IVRI	Indian Veterinary Research Institute
KVK	Krishi Vigyan Kendras
MGMG	Mera Gaon Mera Gaurav
NGOs	Non Government Organisations
NAEAB	National Agricultural Education and Accreditation Board
NDRI	National Dairy Research Institute
NICRA	National Innovation in Climate Resilient Agriculture
NIRJAF	National Institute of Research on Jute & Allied Fibre Technology
NITI	National Institution for transforming India
NRM	National Resource Management
QTY	Quantity
RCAU	Rajendra Central Agricultural University
RLBCAU	Rani Lakshmi Bai CAU, Jhansi
PME	Prioritization Management and Evaluation
SMS	Subject Matter Specialist
IBR	Infectious Bovine Rhinotracheitis
DIVA	Differentiating Infected from Vaccinated Animals
BIRAC	Biotechnology Industry Research Assistance Council
FMDV	foot-and-mouth disease virus
FMD	Foot and Mouth Disease
CSFV	Classical Swine Fever Virus
PPR	peste des petits ruminants
PRA	Participatory Rural Appraisal
BQ	Black Quarter
RAC	Research Advisory Council
R&D	Research and Development
SHG	Self Help Groups

(vii)

SAUs	State Agricultural Universities
SMD	Subject Matter Divisions
IRC	Institute Research council
NPOP	National Programme for Organic Production

CHAPTER – I

ANALYSIS OF DEMANDS FOR GRANTS

A. INTRODUCTORY

Agriculture plays a vital role in India's economy. As per census 2011, 54.6% of the population is engaged in agriculture and allied activities and it contributes 17% to the Country's Gross Value Added. Farmers with their hard work and ingenuity have ensured food security in India. However, despite their immense contribution, average income of farmers in the country remain low as compared to their peers from other sectors. Against this background, ongoing efforts of present Government to double the income of farmers by 2022 is praiseworthy. The Government has identified investment in irrigation, provision of quality seeds and nutrients based on soil health of each field, provision of warehousing and cold chains to prevent post-harvest crop losses, promotion of value addition through food processing, creation of a national farm market, crop insurance scheme to mitigate risks at affordable cost and promotion of ancillary activities like poultry, beekeeping and fisheries for achieving the aim of doubling the income of farmers. However, there is need of huge investment in agricultural research, education and extension services in order to promote inventions for improved varieties of high yielding crop varieties and hybrids, improved cattle breeds, improved and environment friendly fertilizers and pesticides and a committed cadre of scientist and agriculture extension activities which can promote innovations and entrepreneurship in the field of agriculture across the country.

1.2 Research in the field of agriculture is prime requirement to enhance the agricultural productivity in order to meet the food requirements of continually expanding populations and enhancing the level of income of the farming sector, since many of the new technologies, inputs, and techniques of production that increase agricultural productivity are developed through agricultural research. A robust and committed agricultural research system helps to achieve sustainable food and income security for all agricultural producers and consumers.

1.3 The Department of Agricultural Research and Education (DARE) under the Ministry of Agriculture is the nodal Department at Central level to coordinate activities for research and development in agriculture. The Indian Council of Agricultural research (ICAR) is an apex scientific research organization for planning, promotion, execution and coordination of agriculture research and education in the country. The goal of ICAR is to promote sustainable and inclusive agricultural growth and development in the country by interfacing education, research and extension initiatives complemented with efficient and effective institutional, infrastructure and policy support, for ensuring livelihood and environmental security. The ICAR has been given following mandate:-

- Plan, Undertake, Coordinate and Promote Research and Technology Development for Sustainable Agriculture.
- Aid, Impart and Coordinate Agricultural Education to enable Quality Human Resource Development.
- Frontline Extension for technology application, adoption, knowledge management and capacity development for agri-based rural development.

- Policy, Cooperation and Consultancy in Agricultural Research, Education & Extension.

ICAR functions through a wide network of national level institutes and has well-established linkages with State Agriculture Universities and other departments of the Central and State Governments. DARE/ICAR consists of 66 Institutes including 04 Deemed Universities (IARI, NDRI, IVRI and CIFE), 15 National Research Centres, 14 Directorates, 06 National Bureaux, 56 All India Coordinated Research Projects (AICRPs), 25 Network Projects, 69 State and Central Agricultural Universities including 01 Deemed University (Sam Higginbottom Institute of Agriculture, Technology and Sciences) and 665 Krishi Vigyan Kendras.

1.4 There are eight Subject Matter Divisions, viz. i) Crop Science, ii) Natural Resources Management iii) Horticultural Science, iv) Animal Science, v) Fisheries Science, vi) Agricultural Engineering vii) Agricultural Education, and viii) Agricultural Extension and they are entrusted with the over all responsibility for the preparation, scrutiny, review, and technical supervision and guidance of the research schemes, educational programmes and projects within their respective disciplines.

B. ANALYSIS OF DEMAND

1.5 Demand No. 2 pertaining to the Department of Agricultural Research & Education for the year 2017-18 was presented to the Lok Sabha on 09 February, 2017. Allocations proposed for 2017-18 are as follows:-

Details of Head-Wise budget of DARE/ICAR during 2017-18*	
	(Rs. In crore)
Major Head	Budget Estimates
Schemes	
NRM including NICRA	732.17
Agricultural Engineering	213.54
Crop Science	1486.58
Horticulture	602.65
National Agricultural Science Fund	50.00
Animal Science	885.77
Fisheries Science	446.69
Agricultural Extension	887.73
Agricultural Universities and Institutions	736.71
Economic Statistics and Management	69.24
Total	6111.08
Non-Schemes	
Secretariat + contribution (DARE)	13.83
AP Cess	0.15
ICAR Head Quarters*	437.94
Central Agricultural Universities	235.00
National Academy of Agriculture Science	2.00
Total	688.92
Grand TOTAL	6800.00
* wef 2017-18, the distinction between plan and non-plan has been done away with and the combined budget of each head (as per revised Structure)	

1.6 Details of allocations and expenditure under plan head of DARE/ICAR during last two fiscal were as follows:

SI. No.	DEPARTMENT	2015-16			2016-17		
		BE	RE	AE	BE	RE	AE*
PLAN							
	DARE	198.00	189.00	168.13	300.00	201.50	137.09
	ICAR	3493.00	2811.00	2567.19	3400.00	2965.08	2007.93
	TOTAL	3691.00	3000.00	2735.32	3700.00	3166.58	2145.02

*Expenditure up to Dec'16

1.7 When asked about actual increase in allocations to the Department during current fiscal as compared to combined allocations under plan and Non-Plan heads during previous years, the Department stated as under:-

"Actual increase in allocations to the Department during current fiscal as compared to combined allocations under Plan and Non-Plan heads during previous years is as follows:-

(Rs in crore)

Name of the Sector	RE	BE	% age increase
	2016-17	2017-18	
CENTRAL SECTOR SCHEMES			
Natural Resource Management + NICRA	689.73	732.17	6.15
Agricultural Engineering	191.31	213.54	11.62
Crop Science	1378.02	1486.58	7.88
Horticulture	528.87	602.65	13.95
National Agricultural Science Fund	35.00	50.00	42.86
Animal Science	823.25	885.77	7.59
Fisheries Sciences	397.14	446.69	12.48
Agricultural Extension	855.71	887.73	3.74
Agricultural Education	726.46	736.71	1.41
ESM	65.51	69.24	5.69
Total	5691.00	6111.08	7.38
ESTABLISHMENT			
Secretariat Economic Services			
DARE	14.68	15.98	
AP Cess	0.10		
Autonomous Bodies and Institutions			
ICAR Headquarter(Hqrs+IPTM)	332.22	437.94	31.82
CAU Imphal + Barapani	120.00	120.00	0.00
Rani Laxmi Bai CAU Jhansi	35.50	39.00	9.86
CAU Bihar	44.50	76.00	
Total	532.22	672.94	26.44
GRAND TOTAL	6238.00	6800.00	9.01

1.8 When asked about quantum of funds proposed by the DARE for 2017-18, the Department stated as under:-

"The proposed demand of funds in respect of DARE for 2017-18 was Rs. 7665.48 crore."

1.9 On the query of the Committee regarding adequacy of allocated funds to meet the requirements of ICAR, the Secretary of the Department during the course of evidence stated as under:-

‘सन् 2017-18 का हम लोगों का जो बीई एलोकेशन है, वह 6800 करोड़ रुपये का है। इसमें करीब-करीब 4200 के आसपास सैलरी में जाएगा। बाकी करीब 2600 के आसपास जो हमारे पास बचेगा, उसमें से केवीके की सैलरी भी रहती है, वह 800-900 के आस पास रहता है। आपने एजुकेशन का जिक्र किया है, उसे लिए भी हमें करीब-करीब 700 करोड़ रुपये की आवश्यकता होगी। रिसर्च के लिए हमारे पास करीब 600-700 करोड़ रुपये ही उपलब्ध होगा। केवीके केंद्र भी हमने काफी नए खोले हैं। इस साल 21-22 खोल दिए हैं, आगे और भी खोलने हैं। वहां भी बहुत कमियां हैं। कहीं बाउंड्री आदि नहीं है, वह भी करना है। वहां भी अर्थ की बहुत आवश्यकता है। नए-नए महाविद्यालय और विश्वविद्यालय खोलने की बहुत सारी मांग आती हैं। उनको भी पूर्ण करना है। जो भी पहले से प्रावधान किया गया है, बजट डिक्लेरेशन के तहत किया गया है, उनके लिए भी प्रावधान करना है, आईआरआई झारखण्ड, आईआरआई असम है, उनके लिए भी प्रावधान करना है। उसमें अलग से प्रावधान नहीं है तो इसी पैसे में से खर्च करना है। इस हिसाब से पैसे बहुत कम हैं और जितना है, उसी के हिसाब से हम काम कर रहे हैं।’

1.10 He also added as under:

"Sir, funds allocated to research is inadequate. We have requested that this may be doubled".

1.11 On the query of the Committee regarding the reasons for drastic reduction of 14.21 % of allocations to the Department during 2016-17 at RE stage, the Department stated as under:-

"The drastic reduction in the plan allocation of the Department in the RE 2016-17 was apparently due to the overall reduction effected by the Ministry of Finance, Government of India."

1.12 When pointed about failure of the Department to fully utilize available funds, the Secretary of the Department during the course of evidence submitted as under:-

‘आप जो बात कर रहे थे कि हमारे प्लान एक्सपेंडीचर 90% से 95% तक होता रहा है। इस साल 75-80% तक खर्चा हुआ है और एक-डेढ़ महीने में यह 95% से ऊपर तक चला जाएगा लेकिन जो पैसा मिला है, हर साल हमारा जो कमिटमेंट रहता है, उस हिसाब से सारे विभागों से कम ही होता है और हमारा भी कम हुआ है और उसके चलते हमारी कुछ चर्जों को पूर्ण करने में थोड़ी समस्या होती है। नॉन-प्लान एक्सपेंडीचर नीयरली शतप्रतिशत होता है, जिसमें ज्यादातर सैलरी और मेंटेनेंस रहता है, वह करीब-करीब शतप्रतिशत होता है।’

1.13 Further elaborating on the issue, the representative of the Department also added as under:-

‘हमारी कोशिश रहेगी कि जो भी राशि उपलब्ध होगी, जैसा कि डीजीआईसीएआर ने कहा कि निश्चित रूप से जितनी हमारे लिए पैसे की आवश्यकता रहती है, उस अनुपात में निश्चित रूप से कमी रहती है। उसमें बहुत सारा पैसा सैलरी और अदर मेंटेनेंस में जाता है। हम कोशिश करेंगे कि इस बार जो राशि मिली है, उसको शत-प्रतिशत हम उपयोग करें।’

1.14 On the query of the Committee regarding the average expenditure of the Department on Revenue and Capital account during the last five years, the Department stated as under:-

"The average expenditure of the Department on Revenue and Capital account for the last five years is as under:

	2012-13	2013-14	2014-15	2015-16	2016-17*	Average Exp. (2012-17)	2016-17*
Capital	342.02	397.45	280.22	332.59	431.99	356.85	431.99
Revenue	4033.32	4191.77	4242.43	4786.42	3888.86	4228.56	3888.86
Total	4375.34	4589.22	4522.64	5119.01	4320.85	4585.41	4320.85

* Expenditure upto December 2016."

1.15 On the query of the Committee regarding status of the process of switching over to distinction of funds into 'capital and revenue' spending in Institutes of ICAR, the Department stated as under:-

"The Annual Accounts of ICAR are being prepared strictly as per the guidelines of C&AG for autonomous bodies. The Revenue and Capital expenditure are distinctly depicted in the Accounts."

1.16 When asked about impact of abolition of system of plan and non-plan funding and introduction of new system on the efficiency in spending in government in general and ICAR institutes in particular, the Department stated as under:-

"The change will bring higher efficiency and optimal utilisation of allocated funds due to reduced codal formalities."

1.17 On the above issue, the representative of the Department during the course of evidence submitted as under:-

‘आप जैसा जानते हैं कि प्लान, नॉन प्लान को मर्ज किया है। व्यय का सरलीकरण हो जाएगा, उसका प्रासेस सिंप्लीफाइड हो गया है। हमारे पास जो प्लान की स्कीम बनाते थे, वे दोनों मर्ज हो गई हैं। 6800 करोड़ रूपए हम सबको मिले हैं, उसकी हम कोशिश करेंगे कि शत-प्रतिशत उपयोग हो जाए।’

1.18 When asked about the average expenditure of ICAR under the heads of personnel and research during the last five years, the Department stated as under:-

"The average expenditure of ICAR under the heads of personnel and research during the last five years is as under: -

	2012-13	2013-14	2014-15	2015-16	2016-17*	Average Exp. (2012-17)	2016-17*
Personal	1925.89	1983.12	2190.25	2304.96	1391.82	1959.21	1391.82
Research	2449.45	2606.10	2332.39	2814.06	2929.03	2626.21	2929.03
Total	4375.34	4589.22	4522.64	5119.01	4320.85	4585.41	4320.85

* Expenditure upto December 2016."

1.19 When enquired about impact of reduced allocations on implementation of various schemes and Research & development work in ICAR institutions, the Department stated as under:-

"The department ensured that the major programmes/activities falling in the mandate of the each Subject Matter Division were not impacted significantly by the reduction. This was made possible through some sustained efforts and prioritization made by all the constituent units falling under the purview of the various Subject Matter Divisions and some strategic planning. To offset reduction in the allocation given to the department in the RE 2016-17, the priorities were assigned to the ongoing research programmes and adequate funds were allocated from the available budget of the department for this purpose in order to accomplish the research targets set for the year."

C. BUDGETARY ALLOCATION - TWELFTH PLAN

1.20 The Twelfth Plan Outlay earmarked for the DARE was Rs. 25553.00 crore. It has been observed that outlay of only 69.42% allocations (BE) have been made during the period as against earmarked outlays for XIIth plan. It has been further observed that allocations (BE) has been drastically reduced at RE stage during the plan period and is only 53.95% of XII plan. Details of allocations and expenditure to the Department under Plan head of the Department during XII plan are as follows:-

year	Budget Estimate			Revised Estimates			Actual Expenditure		
	DARE	ICAR	Total	DARE	ICAR	Total	DARE	ICAR	Total
2012-13	156.00	3064.00	3220.00	206.50	2313.50	2520.00	85.59	2289.14	2374.73
2013-14	180.00	3235.00	3415.00	120.02	2479.98	2600.00	119.99	2349.18	2469.17
2014-15	190.00	3525.00	3715.00	154.01	2345.99	2500.00	119.21	2149.36	2268.57
2015-16	198.00	3493.00	3691.00	189.00	2811.00	3000.00	168.13	2567.19	2735.32
2016-17	300.00	3400.00	3700.00	201.50	2965.08	3166.58	137.09*	2007.93*	2145.02*
Total	1624.00	16717.00	17741.00	871.03	12915.55	13786.58	574.19*	10418.12*	10992.31*

*Actual Expenditure upto December, 2016

1.21 When asked to furnish average allocations of other Ministries/Departments against earmarked outlays for XII plan, the Department submitted as under:-

"The XII-Plan allocations (BEs) with respect to the total XII-Plan outlay in the form of percentage in respect of the other scientific Ministries/Departments as well as other related ones is as under:

Ministry/Department	XII earmarked FYP Outlay (Rs. in cr)	Total XII FYP allocations (BEs) (Rs. in Cr)	Avg. XII FYP allocations (BEs) (Rs. In Cr)	Percentage of XII FYP allocations with respect to XII Plan earmarked outlay
D/o Agriculture and Cooperation	71500	48289	9657.8	67.54%
D/o Agricultural Research and Education	25553	17741	3548.2	69.43%
D/o Animal Husbandry, Dairying and Fisheries	14179	7259	1451.8	51.20%
D/o Science and Technology	21596	15780	3156	73.07%
D/o Scientific and Industrial Research	17896	10707	2141.4	59.83%
D/o Biotechnology	11804	7877	1575.4	66.73%
D/o Space	39750	29230	5846	73.53%
D/o Atomic Energy	107187	69828	13965.6	65.15%
Ministry of Earth Sciences	9506	6222	1244.4	65.45%
Ministry of Environment and Forests	17874	8169	1633.8	45.70%
Ministry of Food Processing Industries	5990	3038	607.6	50.72%
Ministry of Water Resources	18118	11718	2343.6	64.68%

Source: (i) Planning Commission's Twelfth Five Year Plan (2012-17)
(ii) Budget at Glance 2013-14, 2014-15, 2015-16 and 2016-17

1.22 On the query of the Committee regarding impact of reduced allocations on research and extension activities envisaged by the ICAR during XIIth plan, the Department stated as under:-

"The Department has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the XII Five Year Plan. The Department has also made all out efforts to achieve the set physical targets and set its priorities according to the available funds."

1.23 When asked about the reasons for failure of the Department to fully utilize allocations at RE stage, the Department stated as under:-

"Reasons for low expenditure during the said period have been due to involvement of several agencies while incurring expenditure under the heads "Grant-in-Aid Capital" and "Grant-in-Aid General", which also require a chain of codal formalities as per purchase/ other infrastructural procedures of government of India. The time consuming codal formalities/ procedures have been seeking the preliminary estimates, tendering of proposals for equipment, vetting by Director works, concurrence/ interventions of the Internal Finance, approval of the competent authority and finally placement of orders for procurements/ going ahead with constructions etc.

At several occasions the supplying firms/ construction agencies take long time to supply the articles/ initiation of constructions after placing supply orders in time, which is beyond the control of department. The proposed budget estimates are generally reduced at RE level which compels to review the proposals, and re-exercise the entire purchase/construction procedures. Allocated funds are being released as per limits of the "Monthly Expenditure Plan" that further restrains the planning and execution of works/ purchases etc. Apart from these Department has also to follow various procedures/ guidelines issued by Ministry of Finance time to time."

Details of allocations and expenditure during XII plan under Non-Plan head of the Department are as follows:-

(Rs. In Crore)

year	Budget Estimate			Revised Estimates			Expenditure		
	DARE	ICAR	Total	DARE	ICAR	Total	DARE	ICAR	Total
2012-13	19.65	2152.35	2172.00	8.60	2091.40	2100.00	8.15	2086.42	2094.57
2013-14	9.73	2304.44	2314.17	10.38	2270.70	2281.08	9.72	2240.29	2250.01
2014-15	11.24	2418.15	2429.39	10.39	2373.61	2384.00	9.60	2373.51	2383.11
2015-16	11.79	2617.21	2629.00	11.79	2574.21	2586.00	4.09	2156.41	2160.50
2016-17	13.11	2906.89	2920.00	13.18	3058.24	3071.42	5.53*	2312.90*	2318.43*
Total	65.52	12428.42	12464.56	54.34	12387.14	12422.5	37.09*	11169.53*	11206.62*

*Actual Expenditure upto December, 2016

1.24 Asked about the major heads of non plan expenditure in the Department/ICAR during XII plan, the Department informed as follows:-

"The major heads of non- plan expenditure in the Department/ICAR during XII plans are as under:

1. Salaries
2. Overtime Allowance(OTA)
3. Medical Treatment
4. Domestic Travel Expenses
5. Foreign Travel Expenses
6. Office Expenses
7. Other Administrative Expenses
8. Grants-In-Aid General
9. Contributions
10. Grants for creation of Capital Assets
11. Grants-In-Aid Salaries"

1.25 When asked about the reasons for failure of the Department to utilize allocated funds at RE stage during 2015-16, the Department stated as under:-

"The utilisation during 2015-16 is Rs. 2551.82 crore against the RE allocations of Rs. 2574.21 crore. The saving of Rs. 22.39 crore is due to reduction in demand under the head Grant in Aid –Salaries of ICAR."

D. FUND SURRENDERED

1.26 On the query of the Committee regarding funds surrendered by the DARE during 2015-16 and 2016-17, the Department stated as under:-

"The total funds surrendered by DARE during 2015-16 are Rs. 745.43 crore. The RE 2015-16 allocations were reduced with respect to the BE 2015-16 allocations. The total amount reduced as such was Rs. 734.00 crore. This reduced amount was surrendered by DARE (copies of Surrender Orders are enclosed (**Annexure 'A'**) to Ministry of Finance. Further, an amount of Rs. 11.43 crore was surrendered under Dr. Rajendra Prasad Central Agriculture University, Bihar (Rs. 10.00 crore), Central Agriculture University, Barapani (Rs. 0.01 crore), Rani Lakshmi Bai Central Agriculture University, Bundelkhand (Rs. 0.79 crore) and National Academy of Agricultural Sciences & Indian Agricultural Universities Association (Rs. 0.60 crore). An amount of Rs. 0.03 crore provided to the Department as Token was also surrendered."

E. SUPPLEMENTARY DFGS.

1.27 On the query of the Committee regarding the provisions for supplementary Demands during 2015-16 and 2016-17, the Department stated as under:-

"The DARE has made supplementary Demands during 2015-16 and 2016-17, only Token Supplementary Demand for Grants were submitted and subsequently approved for DARE to meet the enhanced requirement under various Object heads of the Schemes through re-appropriation of savings available under different object heads. No Supplementary DFGs for Cash over BE/RE were submitted by DARE (**Annexure 'B'**)."

F. RE-APPROPRIATION OF FUNDS

1.28 When asked about any re-appropriation of funds made by Department between the schemes/programmes during 2015-16 and 2016-17, the Department stated as under:-

"The DARE had made routine re-appropriations of funds during 2015-16 and 2016-17 pertaining to Various Schemes' North Eastern Component (Major Head 2552 – non-functional) to Corresponding Schemes (under Major Head 2415- functional). Besides such re-appropriations, the re-appropriations were done to meet the enhanced requirement under various Object heads of the Schemes through re-appropriation of savings available under different object heads. This was done after obtaining the approval of the Parliament through Token Supplementary DFGs. (Annexure 'C')."

G. FINANCIAL IRREGULARITIES

1.29 When asked about the cases of financial irregularities reported in the Institutes of ICAR to the DARE during 2015-16 and 2016-17 and action taken thereon, the Department stated as under:-

"Case of financial irregularities reported and action taken by the Department are as under"

S. No	Name of the Charged Officer	Name of the Institute	Nature of Irregularity	Present status
1	Shri Debasis Moitra, CAO, IVRI	CRIJAF, Barrakpore	Renovation of Director's Residence	The Commission vide its O.M. dated 18.1.2017 in agreement with the Disciplinary Authority has advised closure of the case. The order is being issued.
2	Dr W.S. Lakra, OSD Shri Suresh Chandra, CF&AO Shri Suresh Kumar, CAO Dr Chanderkant M.H. Technical Officer Dr A.K.Verma, Scientist	CIFE, Mumbai	Irregularities in construction of Gymnasium	Dr N.S. Rathore, DDG (Education) appointed as IO vide order dated 28.3.2016. Inquiry is in progress. IO reminded to expedite the inquiry vide letters dated 30.6.2016, 1.9.2016, 6.10.2016, 19.1.2017 and 13.2.2017
3	Dr W.S. Lakra, OSD Shri G.R. Deshbandu, Sr Director Shri Suresh Chandra, CF&AO Shri Suresh Kumar, CAO Dr Chanderkant M.H. Technical Officer Dr A.K.Verma, Scientist	CIFE, Mumbai	Procurement of Furniture and interior furnishing	Dr H. Rehman, DDG (AS) appointed as IO vide order dated 2.5.2016. Inquiry is in progress. IO reminded vide letters dated 19.1.2017 and 13.2.2017
4	Dr N. Sudhakar, Ex-Director Dr Mahadev Reddy, Principal Scientist Dr Dattatri, Senior Scientist Dr Rajendu Reddy, Scientist Shri Srinivas Rao, F&AO	ATARI, Zone-V, ZPD, Hyderabad	Financial irregularity of Rs 88 Lakhs in developing module of ATK	Dr Ch. Srinivasa Rao, Director, CRIDA was appointed as Inquiry Officer vide order dated 27.9.2016. Inquiry is in progress.

5	Shri Rakesh Pandey, Chief Technical Officer Shri Rishi Kumar, Assistant	IVRI, Izatnagar	Discrepancies in stock registers and indent vouchers	In respect of Rishi Kumar, Assistant, a penalty of reduction in existing pay by three stages in the same pay band was imposed on him vide order dated 28.9.2016. With respect to the case of Shri Rakesh Pandey, the submissions of CO on IO's report has been received and the file is under submission to the Disciplinary Authority for imposition of penalty
---	--	--------------------	--	---

1.30 On the above issue, the representative of the Department during the course of evidence submitted as under:-

'माननीय सदस्य ने वित्तीय अनियमितता के बारे में प्रश्न किया था। मुझे यह बताते हुए खुशी है कि हमारे विभाग डेयर या आईसीएआर में कोई भी पीएसी का पैरा नहीं है। हम सबने दो चीजें की हैं, इंटरनल ऑडिट का सिस्टम स्ट्रेंगथेन किया है, स्टेच्युचरी ऑडिटर्स भी इसे करते हैं और उन ऑडिटर्स की जो रिपोर्ट आती है, जोनल लेवल पर जाकर, पांच-छः जोन्स में जाकर हम अपने सभी इंस्टीट्यूट के डायरेक्टर्स, फाइनेंस आफिसर्स, इंस्टीट्यूट आफिसर्स से मिलकर उसकी समीक्षा करते हैं और कोशिश करते हैं कि किसी तरह की विनियमितता न आ जाए। हम किसी भी वित्तीय अनियमितता को स्वीकार नहीं करेंगे और कोशिश करेंगे कि उसको हम गंभीरता से लें।'

H. BUDGET & CASH MANAGEMENT SCHEME

1.31 It is understood that the modified Budget and Cash Management (B&CM) Scheme of the Ministry of Finance launched in 2006-07 with the intention to reduce expenditure asymmetry and to plan market borrowings more realistically stipulates amongst other things the following:

- I. Disclosure of monthly expenditure of major Departments.
- II. Quarterly exchequer control with a limit of maximum 33% funds in Quarter-4 (Q-4).
- III. March spending control with a maximum ceiling of 15% of funds.

1.32 When asked about the quantum of funds spent by the Department in each quarter of the last fiscal, the Department stated as under:-

"The quantum of funds spent by the DARE/ICAR in each quarter of the last fiscal and the spending in percentage terms of total funds, quarter-wise is as under:

(Rs. In Cr.)

	Quarter-I	Spending %	Quarter-II	Spending %	Quarter-III	Spending %	Quarter-IV	Spending %	Total
Plan	1796.00	48.66	49.50	1.34	922.75	25.00	922.75	25.00	3691.00
Non-plan	1529.65	58.18	2.95	0.11	439.15	16.70	657.25	25.00	2629.00
Total	3325.65	52.62	52.45	0.83	1361.90	21.55	1580.00	25.00	6320.00

I. **REVENUE RECEIPT**

1.33 When asked about the steps taken by the Department to augment financial resources apart from budgetary Grants for research and development, the Department stated as under:-

"The targets for Revenue Generation are being set each year for the Units of ICAR. The revenue generation is being monitored on a regular basis and the units are motivated and encouraged to maximise the Revenue Generation."

1.34 When asked about the steps taken by the ICAR for tapping Corporate Social Responsibility funds for Agriculture Research & Extension, the Department stated as under:-

"National Dairy Research Institute, Karnal has initiated efforts for mobilising resources under Corporate Social Responsibility funds by engaging non-governmental organisations for funding of small scale enterprises. Two such ventures related to Women Self Help Groups (SHGs) were funded through CSR funds.

Numbers of proposals are being processed under CSR Good growth plan and operation pollinators with Syngenta and Bayer Crop Science Ltd.

These activities have helped in spreading improved technologies among farmers and creating rural youth entrepreneurship.

Besides, other institutes of Indian Council of Agricultural Research are also collaborating with Private sector for undertaking research on various aspects, the details of which are given under;

Sponsorship/research funding received from private Companies by ICAR during last five financial years."

Institute/Sc heme	Companies	Amount (Rs. in lakhs)
IIMR, Ludhiana	M/s Monsanto India Ltd; M/s Dow AgroSciences Ltd.; M/s Syngenta India Ltd	55.90
IARI, New Delhi	M/s PI Industries	23.00
IIWBR, Karnal	Syngenta India Pvt. Ltd., M/s JubilantInd, Ltd, J.U. Pesticides & Chemicals Pvt. Lts, AKZO Nabal India Ltd, BASF, India Ltd., DuPONT India Pvt. Ltd., Cheminova India Ltd, Dow Agro Sciences India Pvt., Bayer Crop Science, Product Development Agencies, Sumitomo Chemical India Pvt..Ltd., Pepsi Co. India Holder Pvt., Sumitomo Chemical India Pvt. Ltd., FMC India Pvt. Ltd, etc.	109.65
Plant Protection Institutes	M/s Syngenta Ltd.; Crop Life Asea; United Phosphorus Ltd.; Rasi seeds; ATGC india Pvt. Ltd. And research work taken up by AINP Pesticides residue for several Pvt. companies.	1860.58
Oilseeds & Pulses institutes	22 sponsored/contract research projects conducted at different institutes Indore during the last five years funded from Pvt Sector.	155.92
Commercial Crops institutes	FMC India Private Limited, Bayer Crop Science, Jain irrigation Ltd., Jalgaon; PramukhAgriclinic, Surat; Sri Ram (DSCL), Deepak Fertilizers & Petro Chemicals Co . Ltd; Nagarjuna Fertilizers; DuPont; Rana Sugars, Amritsar; IPM Labs, PrasmoAgri, UPL, Privi Life Sciences, Biodeg Chemical; Privi Life Sciences, Cytozyme Labs, SDS Remedies Pvt. Ltd., Chennai; Gujarat Eco Microbial Technology Pvt. Ltd, United Phosphorous Limited, Mumbai and Parijat Industries India Pvt. Ltd	201.87

1.35 On the query of the Committee regarding the targets and achievements of revenue generation of institutes of ICAR during 2015-16 and 2016-17, the Department stated as under:-

"The Targets and achievements for 2015-16 and targets for 2016-17 are as follows:-

(Rs. In Lakhs)

S.No.	Name of the Division	Revenue Receipts		
		Target for 2015-16	Achievements 2015-2016*	Target for 2016-17
1.	Crop Science	2618.17	1230.93	3212.01
2.	Horticulture Science	2194.27	1008.10	2697.23
3.	Animal Science	4076.03	2069.42	5069.78
4.	Natural Resource Management	1839.33	820.36	2271.19
5.	Fisheries Science	677.77	340.52	823.26
6.	Agricultural Engineering	544.44	257.87	674.70
7.	Agricultural Economics and Statistics	73.87	46.95	88.64
8.	Agricultural Education	127.88	118.43	159.63
9.	Agricultural Extension	0.53	5.69	0.63
10.	Agricultural Scientists' Recruitment Board	277.24	0.00	332.69
11.	Publication & Information Division (D-KMA)	15.66	21.80	18.79
12.	ICAR Headquarters, New Delhi (IPR)	101.16	143.78	126.45
	TOTAL REVENUE RECEIPTS AND TARGETED RECEIPTS	12546.35	6063.85	15475.00

*This does not include the sale proceeds of Land, Building & Vehicle; Interest earned on Short-Term deposits; and Recovery of Loans and Advances

1.36 When asked about the targets for revenue generation from institutes of ICAR being set for 2017-18, the Department stated as under:-

"The Targets for Revenue Generation for 2017-18 would be set on actual achievements by the units during 2016-17."

1.37 When asked to furnish details of fee received by all institutions of ICAR for consultancy/training services provided to other organizations during 2015-16 and 2016-17, the Department stated as under:-

"As per Schedule 8 of the Annual Accounts of ICAR for 2015-16, an amount of Rs. 13.63 crore was received as Fee / Income for Consultancy/ Training services provided to Other organisations by the ICAR Units. During 2016-17 (till August, 2016), an income of Rs. 4.94 crore has been recorded."

1.38 When asked to provide details of utilization of revenue generated by DARE/ICAR institutes during the last five years, the Department furnished as under:-

'The details of utilization of revenue generated by DARE/ICAR institutes during the last five years are as under:

(Rs. In lakhs)

Year	Amount
2012-13	8671.76
2013-14	12242.75
2014-15	24487.88
2015-16	27963.90
2016-17	Nil

J. PLANNING IN THE ERA OF NITI AAYOG

1.39 After abolition of system of five year planning, NITI Aayog has proposed for formulation of 15 years Perspective Plan linked to the long-term social goals and sustainable development goals, a seven-year strategy from 2017-18 to convert the

longer vision into implementable policy which would have a provision of a mid-term review after three years.

1.40 On the query of the Committee regarding preparation of Institute-wise goals/targets of ICAR, the Department stated as under:-

"Department has clubbed institutes in different themes/ schemes in accordance with the guidelines/ directives of Niti Ayog and Ministry of Finance for better monitoring and performance evaluation. The goals/targets of the revised schemes are given in **(Annexure 'D')**."

1.41 When asked about the assessment of quantum of fund required by the ICAR during next 15 years, the Department stated as under:-

"As per latest guidelines of the Ministry of Finance, after the 12th Five-year plan, the medium term framework for schemes and their sunset dates will become co-terminus with the Finance Commission Cycles, the first one being the remaining Fourteenth Finance Commission (FFC) period ending March 2020. Accordingly, it was directed by Ministry of Finance to project funding requirements for next three years ending March 2020. The Department of Expenditure, Ministry of finance has also communicated that outlay for Central Sector Schemes over the remaining FFC will be conveyed in consultation with Budget Division of Ministry of Finance."

1.42 On the query of the Committee regarding system under DARE/ICAR for long term planning and assessment of financial resources to achieve goals envisaged in the field of Agricultural research and education, the Department stated as under:-

"India follows a policy of public investment in science and technology for economic development. This is because of strategic nature of science, amount of resources needed and dealings with international organizations

on scientific matters. Around 14 per cent of the total R&D expenditure of the Union Government is on agricultural research and education, and more than half of ICAR budget is spent on SAUs, KVKs and AICRPs. The public investment is examined by computing the research intensity ratio (research expenditure as percentage of AgGDP). The current agricultural research expenditure intensity is about 0.4 per cent for India. The Department of Agriculture Research and Education (DARE)/ ICAR had proposed an amount of Rs.57,887.21 crore for the XII Plan. The Working Group appointed by the Planning Commission (now NITI Aayog) had also recommended Rs.55,000 crore as XII Plan Outlay for DARE/ICAR. The Department had been communicated the Gross Budgetary Support of Rs.25,553 crore for the XII Plan by the Planning Commission on September 2012. As per existing trend, over a period of time the DARE/ICARs share of annual allocation (Plan + Non-Plan) w.r.t. corresponding Agricultural GDP (at current prices) is oscillating between 0.3 to 0.4 %. The Parliamentary Standing Committee on Agriculture had been strongly recommending throughout that the Department should be provided at least 1% of AgGDP, so as to boost the on-going efforts of the Department through agriculture research, education and extension activities to achieve a target of 4% annual growth in agriculture sector. Accordingly, the Department anticipates its future financial requirements while taking into account the above mentioned contemporary economic factors in view."

CHAPTER-II
ANALYSIS OF SECTORAL PROGRAMMES

A. CROP SCIENCE DIVISION

2.1 Crop Science Division, through its 17 Research Institutes, 03 Bureau, 02 National Research Centres, 04 Project Directorates, 22 All India Coordinated Research Projects and 11 Network Research Projects and in active collaboration with State Agricultural Universities (SAUs) is engaged in the development of improved crop varieties/ hybrids, cost-effective production and environment-friendly crop protection technologies to enhance crop productivity and ensure food and nutritional security in the country.

2.2 Under the head of Crop Science only 60.97% (BE) of allocations were made as against an earmarked outlays of Rs. 4141.31 crore for XIIth Plan. Funds have been further reduced at RE stage. Status of allocation and utilization of funds during Twelfth Plan are as follows:-

(Rs in crore)

YEAR	BE	RE	Actual Expenditure
2012-13	500.00	413.00	400.58
2013-14	465.00	375.00	368.98
2014-15	470.00	380.30	370.69
2015-16	570.00	495.00	481.69
2016-17	507.75	436.56	316.55*
Total	2512.75	2099.86	1938.49*

2.3 When asked about the reasons for allocations of about only 50.7% (RE) of plan period under the head against XIIth Plan Earmarked outlays, the Department stated as under:-

"The funds are allocated to different Divisions on the basis of overall allocations received by the DARE/ICAR from the Ministry of Finance at the

BE and RE stage. Every year, the Ministry of Finance had reduced the allocations of DARE/ICAR. This has resulted in proportionate reduction to various Divisions at RE stage. The reduction of allocation by the Ministry of Finance at RE stage is the prime reason for significant cut in the allocation of Crop Science Division for the entire XII Plan Period."

2.4 When asked to furnish proposals of the Department for funds for the crop Science Division during 2017-18, the Department stated as under:-

"An amount of Rs. 1639.10 Crores was proposed by the Crop Science Division during 2017-18."

2.5 On the query of the Committee regarding impact of reduced allocations at RE stage on Research work in institutes under Crop Science Division, the Department stated as under:-

"The Division has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the XII Five Year Plan. The Department has also made all out efforts to achieve the set physical targets and set its priorities according to the available funds."

2.6 When asked about the reasons for drastic reduction of Rs.71.19 crore i.e. about 14% at RE stage during 2016-17 under Crop Science, the Department stated as under:-

"The Ministry of Finance had drastically reduced the overall allocation of DARE/ICAR at the RE 2016-17 stage. The reduction of allocation by the Ministry of Finance at the RE 2016-17 has contributed to proportionate reduction in the allocation of Crop Science Division under RE 2016-17."

2.7 The emphasis of the Crop Science Division has been on development of trait-specific high yielding crop varieties and hybrids and a total of 308 improved varieties/hybrids comprising 155 of cereals, 50 of oilseeds, 43 of pulses, 33 of fibers, 18 of forages and 9 of sugarcane were released for cultivation in different agro-ecologies of the country.

2.8 On the query of the Committee regarding achievement of targets set for development of new crop varieties and hybrids, the Department stated as under:-

"The research is a long term and continuous process for developing high yielding crop varieties and hybrids, as such the scientist are involved in the development of region specific high yielding, climate resilient varieties of various crops. Hence in this endeavor a number of projects / research activities are going on. The overall targets is to meet the food and nutrition requirement of the country."

2.9 When asked about the commercialized varieties and hybrids released by the ICAR during XII plan and earnings from these released by the ICAR during XII plan, the Department stated as under:-

"A total of 698 field crop varieties and hybrids have been released during XII Plan, 265 varieties / hybrids have been commercialized till date and currently under seed chain. Varieties include rice (103), wheat (32), barley (9), sorghum (7), bajra (7), maize (7), ragi (6), millet (2), arhar (12), urd bean (5), moong bean (5), cowpea (3), horse gram (1), chickpea (11), lentil (4), pea (3), groundnut (12), mustard (13), linseed (1), safflower (1), soybean (11), sesame (4), castor (1), cotton (1), mesta (2), fodder (2). Further, during 2015-16, a total of 1.28 lakh quintal of breeder seeds have been produced against the indents received from Central and State Agencies."

2.10 On the query of the Committee regarding efforts taken by the ICAR to enhance awareness about new crop varieties and hybrids among farmers and coordination with State Governments for enhanced use of new crop varieties, the Department stated as under:-

"The institutes under the Crop Science division of ICAR are regularly conducting nationwide Front Line Demonstrations (FLDs), on and off farm trainings, skill development program, improved technology demonstrations including varieties/ hybrids in pursuit of technology transfer and to create awareness amongst the farmers for adopting improved scientific packages and practices to enhance the farm

productivity and production. Besides, they regularly organize Kisan Melas, Farmers' Field Days, Kisan Gosthis, scientists-farmers interfaces/ meetings on different aspects of crop production & protection, packages and practices, website updating, sensitization through print and electronic media and empowering the farmers with knowledge. In addition, the improved varieties and production technologies are also demonstrated at the farmers' fields by the ICAR institutes, State Agricultural Universities (SAUs) and Krishi Vigyan Kendras (KVKs) through frontline demonstrations (FLD) program to create awareness among the farmers about them."

B. HORTICULTURE SCIENCE DIVISION

2.11 Horticulture Science Division coordinate and monitors the research programs in the country with the network of 12 Research Institutes, 06 National Research Centres, 05 Project Directorates, 10 All India Coordinated Research Projects and 02 Network Research Projects for technological development in enhancing the horticulture crop productivity through science led growth in the sector. Division has focused research pertaining to development of trait specific varieties and root stocks, molecular markers linked to biotic and abiotic stresses, monitoring and preparation of strategy for invasive and emerging pests and pathogens, enhancing input use efficiency and safe production, evolving strategies for management of pesticide resistance of key pests, exploitation of male sterility systems, transmission of important viruses by vector pests, development of diagnostic kits for identification of pests and diseases, production of quality seed and elite planting material, post- harvest management strategies for production of value added products. Development of machineries and utilization of electronic expert systems for enhanced knowledge management and transferring technologies to end users, development of integrated cropping/farming

systems for improved total factor productivity of horticultural crops in different agro-climatic regions including the island ecosystem are being taken up.

2.12 Under Horticulture Head only 72.78% allocations i.e. Rs. 1035 crore have been at BE stage made as against earmarked outlays of RS.1422.00 crore for 12th Plan. Funds have been further drastically reduced to 54.74% i.e. Rs. 778.35 crore at RE stage. Details of allocation to Horticulture Science Division are as follows:-

(Rs. in crore)

YEAR	BE	RE	AE
2012-13	240.00	145.00	143.55
2013-14	200.00	149.00	139.88
2014-15	210.00	144.35	137.58
2015-16	225.00	180.00	175.54
2016-17	200.00	160.00	131.65*
Total	1035.00	778.35	728.20*

*Actual Expenditure up to December, 2016

2.13 When asked about the reasons for allocations of only 54.74 % (RE) of the plan period under the head against earmarked outlays of Rs. 1422 crore for 12th plan, the Department stated as under:-

"The funds are allocated to different Divisions on the basis of overall allocations received by the DARE/ICAR from the Ministry of Finance at the BE and RE stage. Every year, the Ministry of Finance had reduced the allocations of DARE/ICAR. This has resulted in proportionate reduction to various Divisions at RE stage. The reduction of allocation by the Ministry of Finance at RE stage is the prime reason for significant cut in the allocation of Horticulture Science Division for the entire XII Plan Period."

2.14 When enquired about the reasons for drastic reduction of Rs.40.00 crore i.e. 20% at RE stage during 2016-17, the Department stated as under:-

"The Ministry of Finance had drastically reduced the overall allocation of DARE/ICAR at the RE 2016-17 stage. The reduction of allocation by the Ministry of Finance at the RE 2016-17 has contributed to proportionate

reduction in the allocation of Horticulture Science Division under RE 2016-17."

2.15 When asked to furnish Institute-wise details of plant varieties and hybrids developed and released by the Horticulture Division during the last five years, the Department stated as under:-

Details of plant varieties and hybrids developed and released by the Horticulture Division during the last five years are as under:

Table 1: notified varieties of Horticultural crops

Commodities	2008-2013	2014-16
Fruits	2	8
Vegetables (including potato and onion)	83	74
Spices and Condiments	11	18
Plantation crops	9	8
Flowers	1	4
M & AP	7	1
Tuber & Rhizomes	2	2
Total	115	115

Table 2: List of vegetables, spices notified during the last 6 years:

S.N.	Variety	Hybrid	Resistant	Total
1.	Chilli (1)			1
1.	Bottle gourd (1)			1
2.		Ridge gourd (1)		1
3.	Brinjal (1), Ash gourd (1), Bottle gourd (1), Cauliflower (1)	Brinjal (1),		5
4.	French bean (1),			1
5.	Chilli (2), Cauliflower (1), Cowpea (3), Dolichos (1), Sponge gourd (1) Ash gourd (1),	Tomato (1)	Okra (1), Pea (1)	12
6.	Garlic (1)	Okra (2)	Okra (2)	5
7.		Tomato(1)		1
9	Ash gourd (1)			1
10	Chilli (1)			1
11	Tomato(1), Pea (1)	Brinjal (2)		4
12	Bottle gourd (1) Brinjal (3), Chilli(2), Sponge gourd (1), Tomato (1)			8
13	Onion (1)			1

14	Garlic (1)			1
15	Chilli (1)			1
16	Onion (1)			1
17	Chilli (1), Tomato (1), Muskmelon (1)			3
18	Cowpea (1), Dolichos (1), French bean (2), Pumpkin (1)	Tomato (1), Brinjal (2)		8
19	Onion (8), Garlic (2)			10
20	Pea (1)		Pea (2)	3
Total	52	11	6	69

2.16 When asked about the details of training of trainers, farmers and other stakeholders by the Institutes under Horticulture Division during the last five years, the Department stated as under:-

"The trainings imparted to farmers/beneficiaries, entrepreneurs, stakeholders during the last five years are the following:

- Trainers Training Centres are there in many Horticulture Institutes like ICAR-IIHR, ICAR-IIVR wherein training to agricultural workers for horticulture development in the country is being imparted.
- Feedback is also obtained from the trainees who are trained to see the impact of such training.
- These trained trainees in turn train farmers through participatory rural appraisal (PRA) and the problems arising out of it are incorporated in research programmes of the institutes..
- Further, Horticultural Institutes under ICAR are engaged in creating awareness about the technologies through Krishi Vigyan Kendras (KVKs) of its own or with SAUs.
- Benefits of successful experiments conducted by the research institutions reach the farmers at the grassroot level through scientists-farmers interaction also which take place in the institutes or at the farmers' fields.
- Contextual organization of Kisan Goshties, Website updating, sensitization through print and electronic media and empowering the farmers with knowledge to manage the technologies also take place.
- Details of contextual pests and disease problems and their cost-effective management strategies are also indicated through use of mass media, electronic, e-extension, knowledge management portals, and decision support system for various crops.
- Also Institutes disseminate the technologies through different AICRPs and SAUs."

2.17 On the query of the Committee regarding plan of ICAR to develop local varieties of exotic vegetables and fruits, almonds, walnut, olives etc. in order to promote their cultivation in the country, the Department stated as under:-

"Work has been initiated in such crops as **Fruits:** cape gooseberry, peppeno, rambuttan, dragon fruits, mangosteen, sweet carambola, durian, pulasan, jackfruit and **Vegetables:** broccoli, Chinese cabbage, lettuce, English cucumber."

2.18 When asked to furnish a details of import of agricultural products in the Country during the last five fiscal years, the Department submitted as under:-

India's total agri and allied imports (2011-12 to 2015-1 \Qty: '000 tonnes Value in Rs. Crores

	2011-12		2012-13		2013-14		2014-15		2015-16	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value	Qty	Value
1 TEA	22.43	219	22.30	275	22.74	292	27.45	389	23.62	377
2 COFFEE	46.06	470	71.20	796	59.94	729	74.88	930	65.61	802
3 RICE-BASMOTI	0.46	2	0.00	0	0.00	0	0.00	0	0.00	0
4 RICE(OTHER THAN BASMOTI)	0.60	3	0.72	4	1.44	8	1.96	11	1.02	6
5 WHEAT	0.02	0	2.94	6	11.27	27	29.49	61	516.17	870
6 OTHER CEREALS	15.36	30	45.58	111	22.32	98	23.40	62	206.14	344
7 PULSES	3495.84	9448	4013.24	13345	3177.89	11037	4584.85	17063	5797.78	25619
8 TOBACCO UNMANUFACTURED	2015.63	69	2166.77	92	1.55	80	1.91	98	2.88	137
9 TOBACCO MANUFACTURED		113		155		169		200	0.00	194
10 SPICES	146.77	2285	175.56	2716	155.58	3452	161.07	4392	191.21	5382
11 CASHEW	811.90	5381	898.52	5434	776.33	4668	940.81	6600	961.67	8701
12 CASHEW NUT SHELL LIQUID	0.20	0	0.14	0	0.38	2	1.72	10	1.86	6
13 SESAME SEEDS	0.61	4	38.05	296	72.93	8Q9	34.77	380	23.60	180
14 NIGER SEEDS	0.12	0	0.00	0	0.70	4	0.70	4	5.78	44
15 GROUNDNUT	0.10	0	0.04	0	0.11	0	0.13	0	0.11	0
OTHER OIL SEEDS	41.22	89	44.26	110	54.70	167	51.35	163	63.63	222
VEGETABLE OILS	7081.98	38909	9606.24	53562	7942.90	44038	12701.03	64894	15638.94	68630
18 OIL MEALS	86.13	99	148.30	210	126.94	200	165.10	273	255.02	427
19 GUERGAM MEAL	0.30	10	0.57	34	0.38	22	0.17	6	0.63	14
20 CASTOR OIL	0.06	1	0.14	2	0.07	2	0.05	2	0.03	1
21 SHELLAC	0.54	22	2.78	173	0.68	46	1.77	60	0.71	19
22 SUGAR	99.71	314	1122.25	3094	880.96	2287	1538.64	3668	1943.13	4038
23 MOLLASES	12.40	4	14.68	8	15.07	9	59.55	30	17.51	8
24 FRUITS / VEGETABLE SEEDS	13.18	380	16.05	471	8.29	449	14.01	611	14.33	702
25 FRESH FRUITS	723.27	4611	802.14	6180	769.14	7716	858.11	9544	835.58	11013
26 FRESH VEGETABLES	5.04	7	7.03	11	25.98	42	8.24	11	95.90	212
27 PROCESSED VEGETABLES		120		149		174		104	0.00	120
28 PROCESSED FRUITS AND JUICES		315		432		411		496	0.00	523
29 Cereal Preparations	45.82	316	50.42	360	53.47	419	63.24	569	61.45	573
30 COCOA PRODUCTS	5.08	934	53.33	1049	51.63	1072	65.31	1551	56.42	1399
31 MILLED PRODUCTS	2.88	12	4.52	24	3.98	22	3.471	18	4.39	21
32 MISC PROCESSED ITEMS		915		1268		1474		1749	0.00	1799
33 ANIMAL CASINGS	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0
34 BUFFALO MEAT		0		0		0		0	0.00	0

35	SHEEP/GOAT MEAT	0.01	0	0.02	2	0.06	5	0.09	9	0.05	
36	OTHER MEAT	0.54	12	0.43	16	0.36	16	0.47	20	0.50	17
37	PROCESSED MEAT	0.96	10	0.57	9	0.39	8	0.17	5	0.07	3
38	DAIRY PRODUCTS	0.00	1219	0.00	184	0.00	233	0.00	375	0.00	371
39	POULTRY PRODUCTS		20		18		23		38	0.00	26
40	FLORICLTR PRODUCTS		69		86		112		113	0.00	114
41	ALCOHOLIC BEVERAGES		1310		1417		2076	0.00	2508	0.00	2915
42	MARINE PRODUCTS	34.22	570	28.10	453	31.22	411	27.58	452	50.13	635
43	AYUSH AND HERBAL PRODUCTS	0.89	185	10.96	244	10.86	318	9.32	353	11.73	355
44	JUTE, RAW	181.26	449	148.73	371	52.65	146	44.00	140	88.37	363
45	JUTE HESSIAN	0.00	177	0.00	87	0.00	80	0.00	178	0.00	180
46	COTTON RAW INCLD. WASTE	0.00	1059	232.55	2467	180.97	2376	258.90	3101	231.63	<u>2563</u>
	India's total agri and allied imports		70165		95719		85727		121238		139934
	% of growth over previous year		37		36		-10		41		15
	Country's total import		2345463		2669162		2715434		2733935		<u>2485927</u>
	% share of agri import in total imports		2.99,		3.59		3.16		4.43		5.63

Source: DGCIS, KoI (D/o Commerce)

2.19 When enquired about efforts made by the Government/ICAR to reduce the cost of cultivation of natural Menthol so as to make it competitive against artificial Menthol, the Secretary of the Department during evidence submitted as under:-

‘यह बिल्कुल सही बात है कि जो सिंथेटिक प्रोडक्ट आ जाता है, वह कम मूल्य में उपलब्ध हो जाता है और जो प्राकृतिक प्रोडक्ट होता है, क्योंकि उसका उगाना और उसका स्टॉर्ट करना, यह सब कॉस्टली हो जाता है, कई बार यह समस्या देखी जाती है। अगर हम पैदावार बढ़ा दें, फार्मिंग में खर्चा कम कर दें और कम खर्च में प्रोसेसिंग भी लगा दें तो हम कम्पीट कर सकते हैं। हमारा शोध मेन्थॉल में उतना नहीं है, लेकिन बाकी कई चीजों में जो हमारा मेडिसिनल अरोमेटिक प्लांट इंस्टीट्यूट, आनन्द में है, वह कर रहा है। वह इस तरह की कुछ किस्में भी लाया है, वह डिटेल्स में आपको दूँगा, अभी मेरे पास उपलब्ध नहीं है। प्रजाति भी उन्होंने विकसित की हैं, मैं आपको डिटेल्स बाद में दे दूँगा। सीएसआईआर जो है, उसके अन्दर एक वन संस्थान है, वह लखनऊ में है, सेन्टर इंस्टीट्यूट ऑफ मेडिसिनल अरोमेटिक प्लांट्स, उसने मेन्थॉल पर बहुत काम किया है।’

2.20 On the query of the Committee regarding study undertaken by the ICAR or any other Government Agency to know the market potential for Indian agriculture products in foreign countries, the Department stated as under:-

"ICAR has not conducted any study on market potential of agricultural commodities in foreign countries. Indian Institute of foreign trade looks in to trade prospects for Agricultural commodities, but to the best of our knowledge no such study has been conducted by it."

C. NATURAL RESOURCE MANAGEMENT DIVISION INCLUDING NICRA

2.21 Natural Research Management Division is engaged in developing location-specific, cost effective and eco-friendly technologies for conservation and management of natural resources through the network of 12 Research Institutes, 01 Bureau, 01 National Research Centres, 01 Project Directorates, 10 All India Coordinated Research Projects and 02 Network Research Projects in the country.

2.22 Under the head of Natural Resource Management only 80.69% i.e. Rs. 1762 crore (BE) were allocated at BE stage as against an earmarked outlays of Rs. 2183.50 crore for XIIth Plan. Funds were further reduced to Rs. 1339.50 crore at RE stage. Status of allocation and utilization of funds during XIIth Plan are as follows:-

(Rs. in crore)

YEAR	BE	RE	Actual Expenditure
2012-13	387.00	260.00	239.66
2013-14	310.00	245.00	232.72
2014-15	325.00	235.00	220.99
2015-16	370.00	321.00	274.71
2016-17	370.00	278.50	196.03
Total	1762.00	1339.5	1164.11

2.23 On the query of the Committee about the reasons for allocations of Rs. 1339.50 crore under the head at RE stage i.e. only 61.34 % (RE) of the against XIIth plan earmarked outlays, the Department Stated as under:-

"The funds are allocated to different Divisions on the basis of overall allocations received by the DARE/ICAR from the Ministry of Finance in the Budget Estimates and Revised Estimates. Every year, the Ministry of Finance had reduced the allocations of DARE/ICAR this has resulted in reduction of funds of various Divisions at RE stage. The reduction of allocation by the Ministry of Finance at RE stage has been the reason for

significant cut in the allocation of NRM Division for the entire XII Plan Period."

2.24 When asked about the proposals put up by the Department for NRM during 2017-18, the Department stated as under:-

"An amount of Rs. 890.96 crore was proposed by the NRM Division under BE 2017-18."

2.25 On the query of the Committee about the reasons for drastic reduction of Rs. 91.5 crore i.e. about 24.73 % at RE stage during 2016-17, the Department stated as under:-

"The Ministry of Finance had drastically reduced the overall allocation of DARE/ICAR at the RE 2016-17 stage. The reduction of allocation by the Ministry of Finance at the RE 2016-17 has contributed to proportionate reduction in the allocation of NRM Division under RE 2016-17."

2.26 On the query of the Committee regarding impact of reduced allocations during XIIth Plan on implementations of Research work in institutes under division of NRM, the Department stated as under:-

"The Division has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the XII Five Year Plan. The Department has also made all out efforts to achieve the set physical targets and set its priorities according to the available funds."

2.27 The Department has stated that research programmes are being carried out in Natural Research Management Division within the perspective of different themes, viz; soil quality assessment, micro level land use planning, integrated soil-water-nutrient management, watershed management, nutrient and water use efficiency, Resource Conservation Technologies, crop diversification, dryland/arid agriculture, abiotic stress management, climate resilient agriculture, conservation agriculture, organic farming,

bioremediation of contaminated soils and water, waste water utilization, bio-fortification, bio fuels, coastal agriculture, agricultural disaster management, solid waste management, precision agriculture, IFS model and integrated agricultural systems simulation modeling.

ORGANIC FARMING

2.28 When asked to furnish details regarding total coverage of organic farming in the country, the Department submitted as under:-

"As per the available statistics, total area under organic certification is 5.71 million Hectare (2015-16). This includes 26% cultivable area with 1.49 million Hectare and rest 74% (4.22 million Hectare) forest and wild area for collection of minor forest produces. State wise details are as under

State-wise certified area (cultivable and wild) under NPOP during 2015-16

(in ha)

S.No.	State Name	Farm area(includes in conversion)	Wild area	Total area
1	Madhya Pradesh	461774.726	1813792.374	2275567.100
2	Himachal Pradesh	12759.125	1345690.120	1358449.245
3	Rajasthan	155020.273	398427.430	553447.703
4	Maharashtra	198352.289	67946.950	266299.239
5	Chhattisgarh	10584.939	170340.000	180924.939
6	Karnataka	93963.340	39683.930	133647.270
7	Odisha	95896.981	13327.068	109224.049
8	Uttar Pradesh	61081.828	45210.563	106292.391
9	Uttarakhand	37221.387	62679.000	99900.387
10	Andhra Pradesh	18251.586	75099.140	93350.726
11	Gujarat	76813.064	3608.340	80421.404
12	Jharkhand	30363.733	46685.000	77048.733
13	Sikkim	75851.211	0.000	75851.211
14	Arunachal Pradesh	4185.260	68300.000	72485.260
15	Jammu & Kashmir	25515.010	29000.000	54515.010
16	Kerala	25899.395	18889.100	44788.495
17	Assam	28433.244	60.000	28493.244
18	Tamil Nadu	14456.500	5073.290	19529.790
19	West Bengal	17890.412	0.000	17890.412
20	Punjab	961.203	16616.000	17577.203
21	Goa	16957.593	0.000	16957.593
22	Telangana	10355.587	0.000	10355.587
23	Nagaland	6186.934	0.000	6186.934
24	Haryana	4869.048	20.160	4889.208

25	Meghalaya	4609.422	0.000	4609.422
26	Lakshadweep	895.521	0.000	895.521
27	Manipur	251.400	0.000	251.400
28	Mizoram	213.800	0.000	213.800
29	Tripura	203.560	0.000	203.560
30	Bihar	91.700	0.000	91.700
31	New Delhi	23.030	0.000	23.030
32	Pondicherry	2.835	0.000	2.835
Total		1489935.936	4220448.465	5710384.401

Source: Information provided by the accredited certification Bodies under NPOP"

2.29 When asked about the efforts being made by the Institutes under NRM Division to develop new methods for organic farming to bring down cost of cultivation and lower the transition phase from normal farming, the Department stated as under:-

"Under Network Project on Organic Farming of ICAR, technologies are being evolved to reduce the cost of production of crops under organic farming using cropping/farming system approach involving green manures, leguminous crops, recycling and enrichment of organic wastes. Initial results indicate that substituting 25% of organic manures with low cost inputs like biofertilizers and *Panchgavya* recorded comparable yield to 100% organic manure application. The experiments conducted through network project on Organic Farming revealed that the conversion period ranges between 2-4 years in high intensive areas depending on the soils and 0-2 years in hilly and rainfed areas for different crops. Addition of more legumes in the systems (intercropping and 2 legume crops in a year) and also adding the low nutrient requiring crops in the rotation are found to be strategy for reducing the conversion period. The results across different locations revealed that legumes grown under organic production system gave comparable yield from the very first year."

2.30 Elaborating on the steps taken by the Government to encourage organic farming alongwith traditional methods of farming, the Secretary of the Department submitted as under:

‘माननीय सदस्यों ऑर्गेनिक फार्मिंग के बारे में भी बात की थी। आर्गेनिक फार्मिंग के लिए एक स्वतंत्र संस्थान बन रहा है, उसका डिक्लरेशन हो चुका है और उसका

ईएफसी इस साल बनाने की हम कोशिश करेंगे। पैसे का प्रावधान तो उतना नहीं है, लेकिन हम इनीशिएट करेंगे। यह सारी जो परम्परागत खेती होती है, उसके ऊपर उसमें शोध किया जायेगा। जिस भी किसान ने ट्रेडिशनल सिस्टम अपनाया है, उसके ऊपर भी शोध किया जायेगा। संस्थान नहीं है, फिर भी हमारा शोध चालू है। हमारा अभी जो फार्मिंग सिस्टम रिसर्च संस्थान उत्तर प्रदेश में है, उस संस्थान में हम ऑर्गेनिक फार्मिंग और पारम्परिक खेती के ऊपर शोध करते हैं। हमने 6-7 साल से इसके ऊपर शोध करके, जैविक खेती की विभिन्न पद्धतियों और पहलुओं के ऊपर शोध करके 45 अलग-अलग ऑर्गेनिक फार्मिंग के सिस्टम हमने बनाये हैं और हमने इनको रिकमंड भी किया है। विभिन्न स्थानों के लिए, रीजन के लिए, विभिन्न क्रॉप्स के लिए इसे बनाया है। उसमें ट्रेडिशनल सिस्टम जैसे-जैसे करते हैं, उसके बारे में भी सोचा गया है और देखा गया है।’

2.31 Further elaborating on the issue, the Secretary of the Department submitted as under:

‘फार्मर प्रैक्टिस के बारे में पहले ही बहुत बात हो चुकी थी। जैसा कि बताया गया, हम परम्परागत कृषि के तहत, ऑर्गेनिक फार्मिंग के तहत इसको हम वैलिडेट करेंगे, जहां-जहां यह नहीं हो पाया, वहाँ उसको हम करेंगे। इस बार कम से कम सौ, इस तरह की जो फार्मर्स प्रैक्टिस है, उसे करने के लिए हम ग्रुप ऑफ सेक्रेटरी में डिस्कस भी किए हैं और लिखे भी हैं कि इस तरह का सौ, जिसे ग्रासरूट इनोवेशन बोला जाता है, डिपार्टमेंट ऑफ साइंस एंड टेक्नोलॉजी इसको ग्राट रूट इनोवेशन बोलते हैं कृषि क्षेत्र में और हमारी परम्परागत कृषि की जो पद्धति है, उसको देखकर हम उसके ऊपर शोध करेंगे, वैलिडेट करेंगे। अगर मॉडिफिकेशन जरूरी होगा, तो वह भी करेंगे और उसे आगे बढ़ाने की कोशिश करेंगे। जैसा मैंने बताया कि 45 इस तरह के सिस्टम हमने 6-7 साल शोध करके, उसको पक्का करके अभी किसान को दे रहे हैं। इसका रिकमंडेशन हो गया है। अन्य भी शोध जारी हैं। नये-नये सिस्टम, नये-नये क्रॉप, नये-नये रीजन के लिए ऑर्गेनिक फार्मिंग की क्या व्यवस्था हो सकती है, उसके लिए भी शोध जारी हैं।’

2.32 On being asked about efforts made by the ICAR for development of improved and economical varieties of organic manure, the Secretary of the Department submitted as under:

‘इसके अलावा जो ऑर्गेनिक मैन्योर की बात हो रही थी, ऑर्गेनिक मैन्योर के बारे में भी हम शोध कर रहे हैं। हमारा भोपाल में जो संस्थान है, इन्डियन इंस्टीट्यूट ऑफ साइल साइंस, उसमें शोध किया गया है और एक कन्सोर्सियम, क्योंकि माइक्रो की आवश्यकता होती है, उसको रैपिड डिग्रेशन करने के लिए और एक कन्सोर्सिया बनाया गया है, अगर उसे अप्लाई करते हैं तो जल्दी से जल्दी डिग्रेशन होता है, कन्वर्सन होता है और कम्पोस्ट बन जाता है। उसका एप्लिकेशन होना चाहिए और हमारी रिकमंडेशन भी यही है कि अभी खाली केमिकल फर्टिलाइजर न यूज करके अगर 25 प्रतिशत कम से कम ऑर्गेनिक फर्टिलाइजर उसमें डाला जाये और कम्पोस्ट डाला जाये तो यह जरूर फायदेमंद होगा, क्योंकि मिट्टी की गुणवत्ता बढ़ेगी और ऑर्गेनिक कार्बन की आवश्यकता है, वह काफी जमीन पर कम है, नॉर्थ-ईस्ट को छोड़कर, तो यह एक दिशा है, उस दिशा में हमने कुछ कदम उठाये हैं, जहाँ भी कमी होगी, वहाँ हम उसे जरूर करेंगे।’

2.33 On the query of the Committee regarding study undertaken by ICAR or other Government agencies to assess market for organic agriculture products in Domestic and international market, the Department stated as under:-

"ICAR has not conducted any study to assess market for organic agriculture products in Domestic and international market. Also other government agencies have not taken any systematic study."

D. ANIMAL SCIENCE

2.34 Animal Science Division coordinate and monitors research programmes for sustainable enhancement of productivity and improvement in health status of livestock and poultry in the country through its 10 Research Institutes, 01 Bureaux, 06 National Research Centres, 02 Project Directorates, 07 All India Coordinated Research Projects and 08 Network Research Projects, which are in operation in different parts of the country at different ICAR institutes, State Agricultural / Veterinary Universities, State Animal Husbandry Departments and Non-Governmental Organizations.

2.35 Under the Head of Animal Science only Rs. 1225 crore i.e. 78.42% of allocations were made at BE stage as against an earmarked outlays of Rs. 1543.00 crore for XIIth Plan. Funds have been further reduced from Rs. 1215 crore to Rs. 970.98 crore at RE stage. Status of allocation and utilistaion of funds during the XIIth Plan are as follows:-

(Rs. in crore)

YEAR	BE	RE	Actual Expenditure
2012-13	250.00	194.00	191.63
2013-14	225.00	189.98	190.22
2014-15	230.00	160.00	153.98
2015-16	250.00	226.00	208.57
2016-17	260.00	201.00	145.24*
Total	1215.00	970.98	891.64*

*Expenditure up to December, 2016

2.36 On the query of the Committee about the reasons for allocations of only Rs. 970.98 crore at RE stage i.e. only 62.93% of the XIIth plan earmarked outlays, the Department stated as under:-

"The funds are allocated to different Divisions on the basis of overall allocations received by the DARE/ICAR from the Ministry of Finance at the BE and RE stage. Every year, the Ministry of Finance had reduced the allocations of DARE/ICAR this has forced to impose proportionate

reduction of various Divisions at RE stage. The reduction of allocation by the Ministry of Finance at RE stage has been largely responsible for significant cut in the allocation of Animal Science Division for the entire XII Plan Period."

2.37 When asked about the proposals put up by the Department for Animal Science during 2017-18, the Department stated as under:-

"An amount of Rs. 1001.35 Crores was proposed by the Animal Science Division during 2017-18."

2.38 On the query of the Committee about the reasons for drastic reduction of Rs. 59 crore i.e. about 22.69% at RE stage during 2016-17, the Department stated as under:-

"The Ministry of Finance had drastically reduced the overall allocation of DARE/ICAR at the RE 2016-17 stage. The reduction of allocation by the Ministry of Finance at the RE 2016-17 has contributed to proportionate reduction in the allocation of Animal Science Division during RE 2016-17."

2.39 When enquired about the impact of reduced allocations at RE stage on Research work in Institutes under Division of Animal Science, the Department stated as under:-

"The Division has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the XII Five Year Plan. The Department has also made all out efforts to achieve the set physical targets and set its priorities according to the available funds."

DEVELOPMENT OF VACCINE FOR ANIMAL'S DISEASES

2.40 When asked about the achievements made by the ICAR in development of vaccine for tackling widespread disease among cattle in the country, the Department stated as under:-

"Achievement been made by the ICAR in development of vaccine for tackling widespread disease among cattle in the country as as under:

- Developed a gene deleted IBR vaccine, which will be DIVA capable. This vaccine will be tested in large animals for which RCGM clearance has been obtained and the work is proposed to be taken up with an industry partner under the BIRAC mode of DBT, Govt. of India.
- Developed a DIVA enabled mutant Brucella vaccine strain. Following initial successful trials, large animal experimentation is being done for further evaluation.
- Developed Johne's disease vaccine.
- ICAR-Directorate on Foot and Mouth Disease, Mukteswar is working for the followings:
 - Identification of potential vaccine strains for FMDV serotype A to use in future on
 - Development of 3A and 3B epitope deletion mutant of FMDV to explore marker vaccine potential
 - Development of infectious cDNA clone for a serotype Asia 1 and O FMD virus
 - Improved adaptability of FMDV in BHK-21 cells for virus isolation
 - Improved thermo-stable FMD virus serotype O by reverse genetics technique.
 - One-step purification of FMDV by metal affinity chromatography
 - Development of chimeric foot-and-mouth disease virus."

2.41 On the above issue the Secretary of the Department submitted as under:

‘इसी तरह से पशुधन का उत्पादन बढ़ाने के लिए भी प्रयास किए जा रहे हैं। क्योंकि बीमारी एक बहुत बड़ी समस्या है। उसके लिए तीन अलग-अलग वैक्सीन हमने विकसित किए हैं जैसे घोड़े के लिए, ऊंट के लिए, गाय-भैंस के लिए अलग-अलग प्रकार की वैक्सीन लाए हैं। उसके साथ डायग्नॉस्टिक कीट भी लाए हैं। जैसे ब्रुसिलॉसिस बीमारी है, उसमें गर्भपात हो जात है, उसका डिटेक्शन किट लाए हैं। इस तरह से 15 अलग-अलग बीमारियों के लिए डिटेक्शन किट लाए हैं। इसके अलावा मछली में भी उसी तरह से जैसे कंफाइंड कंट्रोल कंडीशन में ब्रीडिंग करना, उसका प्रोडक्शन करना, जैस मिल्क फिश स्पीशीज़ का बनाए हैं।’

2.42 When asked to furnish details of production capacity of vaccine for animal disease in the country, the Department informed as under:-

"Details of production capacity of vaccine for animal disease in the country is as under.

The assessment made during 2013-14 by the Standardization Division of ICAR-IVRI, Izatnagar, based on interaction with industrial manufacturers of biological in the country, the production capacity of different animal vaccines is as under:

The production capacity of different vaccines:

1. **FMD vaccine:** The production capacity of FMD vaccine in India is around 400 million doses/yr. For biannual immunization of approximately 511 million animals (cattle, buffalo, sheep, goats and pigs), 1022 million doses/yr. are required.
2. **Swine Fever vaccine:** The production capacity of CSFV vaccine in India around 0.7 million doses/yr and requirement is 10 million doses/yr.
3. **PPR vaccine:** The production capacity of PPR vaccine in India around 160 million doses/yr. For immunization of approximately 200 million sheep, and goats, 200 million doses/yr are required.
4. **Sheeppox vaccine:** The production capacity of Sheeppox vaccine in India around 31 million doses/yr. Actual need of the vaccine is as per epidemiological demand. For complete coverage of 65 million sheep, approximately 65 million doses/yr are required.
5. **Goatpox vaccine:** The production capacity of Goatpox vaccine in India around 2 million doses/yr. For complete vaccine coverage, 135 million doses are required per year.
6. **Rabies vaccine:** Production capacity is 50 million doses per year and total requirement is 522 million doses/yr for immunization of livestock and dogs.
7. **Bluetongue vaccine:** Production capacity is 5 million doses per year and total requirement is 65 million doses/yr for sheep
8. **Haemorrhagic Septicemia (HS) vaccine:** Production capacity is 308 million doses per year and total requirement is 365 million doses/yr for cattle, buffaloes & sheep.
9. **BQ vaccine:** Production capacity is 110 million doses per year and total requirement is 300 million doses/yr for cattle & buffaloes."

E. FISHERIES SCIENCE

2.43 Fisheries Science Division is undertaking research and academic programmes in fisheries and aquaculture sector in the country through the network of 06 Research Institutes, 01 Bureaux, 01 Project Directorates. The research and academic programmes in fisheries and aquaculture are presently being implemented through six Plan Schemes and two Sub-Schemes under three major Themes.

2.44 Under the head of Fisheries Science only Rs. 483 crore i.e. 52.10% of allocations were made at BE stage as against an earmarked outlays of Rs. 735.00 crore for XIIth Plan. Funds have been further reduced to Rs. 360 crore at RE stage. Status of allocation and utilisation of funds during the XIIth Plan are as follows:-

(Rs. in crore)

YEAR	BE	RE	Actual Expenditure
2012-13	103.00	69.00	68.82
2013-14	85.00	70.00	69.77
2014-15	95.00	65.00	63.73
2015-16	100.00	78.00	76.40
2016-17	100.00	78.00	63.14*
Total	483.00	360.00	341.86*

2.45 On the query of the Committee about the reasons for allocations of only Rs. 360 crore i.e. 48.98 % of the XIIth plan earmarked outlays, the Department stated as under:-

"The reduction in the overall plan budget of the Fisheries Science Division during the XII Plan has been, due to overall reduction in the Plan outlay of the ICAR/DARE by Ministry of Finance. Accordingly, there has been a proportionate cut in the budget of the Fisheries Science Division."

2.46 When asked about the proposal of the Department for funds for Fishery Science during 2017-18, the Department stated as under:-

"An amount of Rs. 480.18 Crore was proposed by the Fisheries Science Division during 2017-18."

2.47 On the query of the Committee about the reasons for drastic reduction of Rs. 22 crore i.e. about 22 % at RE stage during 2016-17 under this head, the Department stated as under:-

"The drastic reduction in the allocation of Fisheries Division in the RE 2016-17 (Plan) was apparently due to the overall cut effected by the Ministry of Finance in RE 2016-17."

2.48 On the query of the Committee about the impact of reduced allocations at RE stage on Research work in institutes under division of Fishery Science, the Department stated as under:-

"The funds made available to the Division at RE stage were judiciously distributed among the on-going Plan Schemes depending on their priorities, to ensure that the on-going research priorities are addressed smoothly and efficiently."

F. AGRICULTURAL ENGINEERING

2.49 Agricultural Engineering Division through its 05 Research Institutes, 06 All India Coordinated Research Projects and 02 Network Research Projects mandated to plan, coordinate, and monitor R&D programmes and serve as an information repository in Agricultural Engineering to make Indian agriculture profitable, sustainable and globally competitive enterprise through engineering interventions. It is involved in development and demonstration of technologies related to mechanization of production and post-production agriculture using conventional and non-conventional energy sources and

includes mechanization of irrigation and drainage activities; post-harvest and value addition of agricultural products and by products. Under the major head Agricultural Engineering the following allocations have been made against earmarked outlays of Rs.1100 crore for XIIth Plan:

(Rs. in crore)

YEAR	BE	RE	AE
2012-13	78.00	52.00	51.59
2013-14	75.00	55.00	54.60
2014-15	85.00	65.00	64.62
2015-16	90.00	82.00	80.79
2016-17	100.00	78.00	66.05*
Total	428.00	332.00	317.65*

*Expenditure up to December, 2016

2.50 On the query of the Committee about the reasons for allocations of only Rs. 332 crore at RE stage i.e. 30.18 % of the plan XIIth plan earmarked outlays of Rs. 1100 crore, the Department stated as under:-

"The reduction in the overall plan budget of the Division during the XII Plan has been due to overall reduction in the Plan outlay of the ICAR/DARE by Ministry of Finance. Accordingly, there has been a proportionate cut in the budget of the Agricultural Engineering Division."

2.51 When asked about the proposals of the Department for funds for Agriculture Engineering Division during 2017-18, the Department stated as under:-

"An amount of Rs. 255.91 Crore was proposed by the Agriculture Engineering Division during 2017-18."

2.52 When enquired about the reasons for drastic reduction of Rs. 22 crore i.e. about 22 % at RE stage during 2016-17, the Department stated as under:-

"The drastic reduction in the allocation of Fisheries Division in the RE 2016-17 (Plan) was apparently due to the overall cut effected by the Ministry of Finance in RE 2016-17."

2.53 On the query of the Committee about the impact of reduced allocations at RE stage on Research work in institutes under Agriculture Engineering Division, the Department stated as under:-

"The Division has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the XII Five Year Plan. The department has also made all out efforts to achieve the set physical targets and set its priorities according to the available funds at RE stage."

2.54 Agricultural Engineering Division is involved in development and demonstration of technologies related to mechanization of production and post-production agriculture using conventional and non-conventional energy sources and includes mechanization of irrigation and drainage activities; post-harvest and value addition of agricultural products and by products. When asked to furnish the details regarding import of agricultural machines and tools in the country, the Department stated that ICAR does not maintain this information.

2.55 On the query of the Committee regarding success achieved by the Institutes under Agricultural Engineering division in development of locally suitable agricultural machineries such as harvester, power tiller of small horse power, threshing machines, seed planters etc, the Department stated as under:-

"The agricultural Engineering Division has developed thirteen technologies related to seeding, planting, plant protection, harvesting, threshing etc. Besides, technologies and protocols pertaining to post harvest loss reduction and value addition, renewable energy for agriculture and

irrigation have also been developed. All these technologies are suitable for different localities of India."

2.56 When asked about the details regarding machineries or tools developed by the Institutes under the Division during the last five years, the Department stated as under:-

"The 38 technologies developed by ICAR-CIAE, Bhopal have resulted into development of 34 machines or tools (**Annexure 'E'**). Fifty farm equipments and machineries have been developed under AICRP on FIM. Twenty-two technologies were developed in AICRP on UAE. Eleven technologies developed under AICRP on ESA. The ICAR-CIPHET, Ludhiana has developed 35 machines. The ICAR-NIRJAFT has developed 28 technologies. ICAR-CIRCOT has developed 59 technologies including machines, tools, process technology and products in the area of post-harvest processing of cotton and value addition to cotton biomass and by-products."

2.57 On the above issue, the Secretary of the Department submitted as under:

‘मशीनरी की बात भी आप कर रहे थे, वहां भी 51 नए डिज़ाइंस और प्रोटोटाइप मशीनरी हमने डिज़ाइन और डेवलप की हैं। उसमें से उसके अंदर काफी छोटे किसान के लिए, सीमांत किसान के लिए जहां जमीन बहुत कम है, उसके लिए भी कई इक्युपमेंट्स उसमें शामिल हैं। उसमें कई इक्युपमेंट्स ऐसे भी हैं, जो प्रसंस्करण में काम आएंगे। किसानों की आमदनी की बात आप कर रहे थे, यह वास्तव में एक बड़ी समस्या है, किसानों की आमदनी को बढ़ाना है, उस दिशा में प्रसंस्करण एक मज़बूत भूमिका निभाता है। उसके लिए छोटे-छोटे मशींस ले कर प्रोडक्शन साइट में अगर प्रोसेसिंग हो सकता है, जैसे हमारे मसाला उत्पादन में काफी आगे हैं, जब मसाले को कूट कर पाउडर करते हैं तो उसका तापमान बढ़ जाता है, लेकिन गुणवत्ता घट जाती है। उसके लिए एक छोटी मशीन लाए हैं, जिसमें तापमान कम रहेगा, ताकि उसकी गुणवत्ता बनी रहेगी। इसी तरह के कई इक्युपमेंट्स फल और सब्जियों के भी बनाए हैं। एक सिस्टम फोटोवोल्टा सोलर लाए हैं, ताकि सोलर एनर्जी यूज़ कर के काफी लंबे समय तक सब्जी और फलों को सुरक्षित रखा जा सकता है और सैल्फ लाइफ बढ़ाई जा सकती है। इस तरह के हमने 50-51 इक्युपमेंट्स बनाए हैं।’

2.58 When asked about the commercialization of machines/tools developed and revenue earned by the Institutes under the Division, the Department stated as under:-

"ICAR-CIAE has commercialized 18 previously developed and 9 technologies developed during XII plan. Twenty-two farm equipment and machinery have been commercialized under AICRP on FIM, ten technologies under AICRP on UAE and two technologies under AICRP on ESA have been commercialized. The technologies have been licensed to different stakeholders through which institute earned a revenue of about Rs. 78 Lakhs. The ICAR-CIPHET licensed 23 technologies and revenue earned was Rs. 176.61 Lakhs. ICAR-NIRJAFT commercialized 18 technologies. ICAR-CIRCOT has commercialized 16 technologies and the revenue earned was Rs 61.42 lakhs."

F. AGRICULTURAL EXTENSION

2.59 Agricultural Extension Division has a mandate of dissemination of available agricultural knowledge and technologies to end users through 08 Agricultural Technology Application Research Institutes, 01 Directorate of Knowledge Management in Agriculture (DKMA) and one plan Scheme on continuation and establishment of new Krishi Vigyan Kendras (KVKs). ICAR has network of 665 KVKs in the country, which include 447 under Agricultural Universities, 63 in ICAR Institutes; 101 with Non-Government Organizations, 3 under PSUs, 36 in State Government and 15 under Central Universities/ Deemed Universities and Other Educational Institutes.

CONTINUATION AND ESTABLISHMENT OF NEW 'KVKs'

2.60 Under this head following allocations were made during XIIth plan as against earmarked outlays of Rs. 5739.56 crore:-

(Rs. in crore)

YEAR	BE	RE	AE
2012-13	491.67	435.39	410.89
2013-14	496.88	527.25	499.09
2014-15	586.50	533.60	523.50
2015-16	644.85	656.50	648.75
2016-17	745.00	845.62	549.05*
Total	2964.9	2998.36	2631.28*

2.61 When asked about the reasons for allocations of only 52.24 % under the head during XIIth plan, the Department stated as under:-

"Against an earmarked allocation of Rs. 5739.56 crore, the KVK Scheme was approved for Rs. 3900.00 crore for the XII Plan. Against the approved allocation of Rs. 3900.00 crore, the fund received so far through the annual Gross Budgetary Support is to the tune of Rs. 2998.36 crore, which is 76.88% of the approved allocation."

2.62 On the query of the Committee about the impact of reduced allocations on implementation of the scheme, the Department stated as under:-

"To bring the Scheme in sync with the approved allocation, the Capital expenditure were prioritized. The spill over works and administrative buildings of KVKs are being taken up. The residential buildings, consequently could not be under taken."

2.63 When asked about the reasons for upward revision of funds at RE stage during 2016-17, the Department stated as under:-

"After approval of the KVK scheme by the Government of India, establishment of new and additional KVKs were initiated. In order to make the new KVKs functional, additional allocation of Rs.200.00 crore was requested at RE stage during the financial year 2016-17 against which Rs. 100 crore were allocated."

2.64 The Committee further note that allocations of Rs. 867.60 crore have been made for KVKs scheme during 2017-18. When asked as to whether the funds for creation of

necessary infrastructure in existing KVKs and establishment of additional KVKs during 2017-18 would be sufficient, the Department stated as under:-

"No Sir. An additional requirement of Rs.200.00 crore in the financial year 2017-18 would meet the requirement for creation of infrastructure for existing KVKs and establishment of additional KVKs."

2.65 While emphasizing need of additional funds for KVKs, the Secretary of the Department submitted as under:

‘केवीके केंद्र भी हमने काफी नए खोले हैं। इस साल 21-22 खोल दिए हैं, आगे और भी खोलने हैं। वहां भी बहुत कमियां हैं। कहीं बाउंड्री आदि नहीं है, वह भी करना है। वहां भी अर्थ की बहुत आवश्यकता है।’

2.66 On the query of the Committee about the steps taken by the Department to augment the resources in addition to Grants from the Government in order to meet infrastructure and manpower requirement for KVKs in the Country, the Department stated as under:-

"The KVK Scheme is cent percent funded by the Government of India. Due to social commitment of KVKs, the scope of internal resource generation is limited. Further, the clientele which is being served by the KVKs are mostly farmers and rural population and, therefore, commercialization of services under the KVK Scheme is not feasible."

2.67 On the query of the Committee about the efforts made by the Department to explore the funds available under Corporate Social Responsibility funds with Public/private companies for KVKs scheme, the Department stated that they are yet to explore this avenue.

2.68 When asked to furnish status of achievement and infrastructure in KVKs in the country during the last three years, the Department stated as under:-

"During the last three years the KVKs have undertaken 0.98 lakh on farm trials; conducted 3.21 lakh Frontline demonstration (FLD) on various crops to establish the production potential of improved agricultural technologies on the farmers fields; imparted trainings to 40.90 lakh farmers for improving their knowledge and skills on various aspects of farming; In addition, the KVKs have created awareness on improved agricultural technology among the farmers through a large number of extension activities benefitting more than 4.48 crore participants. During the last three years 0.88 lakh quintals seed of improved varieties of different crops, 12.52 crore good quality planting materials of various crops and plant species and 9.09 crore livestock strains and finger lings produced by the KVKs have been made available to the farmers. In addition, the KVKs have tested 13.36 lakh samples of soil, water, plant and manures and provided advisories on such issues to the farmers to solve their problems. Besides, the KVKs provided Mobile agro-advisories on different aspects of agriculture including advisories on plant protection, weather conditions and market information etc. to 395.44 lakh farmers. Development of need based infrastructure in KVKs is a continuous process. Each KVK is provided modest infrastructure administrative building, demonstration units, farmer's hostel and staff quarters depending upon the need and availability of funds for the purpose. As per the availability of fund, so far ICAR has provided Administrative building to 563 KVKs, Farmers Hostel in 513 KVKs, Demonstration units in 493 KVKs and Soil Water Testing Labs in 389 KVKs and soil testing kits in 400 KVKs. In addition, funds have been received from DAC&FW for strengthening of 250 more KVKs with mini soil testing labs during 2016-17."

2.69 On the query of the Committee regarding extension support provided by the respective State Governments to meet the need of farmers in the country and reforms required in agriculture extension support to the farmers in the country, the Department stated as under:-

"The Indian Council of Agricultural Research (ICAR) has established a network of 665 Krishi Vigyan Kendras (KVKs) in the country aiming at technology assessment and demonstration for its application and capacity development. Provision of extension services to farmers is done by the main extension system operated by State Governments. In order to strengthen the main extension system of State Governments, the Department of Agriculture, Cooperation and Farmers Welfare has provided support to States for setting up of Agricultural Technology Management Agency (ATMA) aiming at making extension system farmer driven and farmer accountable by way of new institutional arrangements for technology dissemination at district level. ATMA has provision for active participation of farmers/farmer-groups, NGOs, KVK, Panchayati Raj Institutions and other stakeholders operating at district level and below. At present, the ATMA Scheme is under implementation in 652 districts in 29 States and 3 UTs in the country."

2.70 On the query of the Committee about the efforts made by the Department for exploring alternative system of agriculture extension services, the Department stated as under:

"Under the program of "Mera Gaon Mera Gaurav", the groups of 4-5 Scientists are adopting a village for demonstration of Scientific Knowledge to farmers/ group of farming personals in holistic manners to disseminate technologies."

2.71 The Department has stated that recent activities under KVK Scheme includes (Attracting and Retaining Youth in Agriculture ARYA) with an objective to attract and empower the youth in rural areas to take up various agriculture and allied enterprises for sustainable income and gainful employment in selected districts; Farmer FIRST Programme (FFP) aiming at increased farmers – scientist interface for enriching knowledge and integrating technology for field application and Mera Gaon Mera Gaurav (MGMG) with an aim to encourage agriculture scientists to adopt villages and give

suitable advice to the farmers on technical and other related aspects in a time frame through personal visits or on telephone.

2.72 When asked to furnish details of allocations and work done under above mentioned initiatives, the Department stated as under:-

"Details of work done under above mentioned schemes during XII Plan are as under.

(a) Attracting and Retaining Youth in Agriculture (ARYA): Since, 2015-16, ARYA project is being implemented in 25 States through KVKs, one district from each State with technical partners from ICAR Institutes and Agricultural Universities for taking up entrepreneurial activities through skill development of rural youth. During 2015-16, 1100 youth have been involved, while for the year 2016-17, 4400 youth have been targeted to be involved in the project. During the financial year 2015-16, an allocation of Rs. 200 lakh was made. During the financial year 2016-17, an allocation of Rs. 700 lakh has been made.

(b) Farmer FIRST Programme: The Farmer FIRST aims at enriching Farmers –Scientist interface, technology assemblage, application and feedback, partnership and institutional building and content mobilization. It will provide a platform to farmers and scientists for creating linkages, capacity building, technology adaptation and application, on-site input management, feedback and institution building. During the current Year, 52 projects have been sanctioned with an outlay of Rs.1653.60 lakh covering 31200 farmers.

(c) Mera Gaon Mera Gaurav (MGMG): The Government has launched “Mera Gaon Mera Gaurav” Scheme in August 2015. Under this extension programme a group of 3-4 scientists each consisting of different disciplines form ICAR Institutes/University of National Agricultural Research System at every Institute/University should adopt one village and give suitable advice to the farmers on technical and other related aspects in a time frame through personal visits or on telephone. Scientists also create awareness among farmers about climate change, other customized technologies, protective measures, swachh Bharat abhiyan and other issues of local and national importance. In this process of social transformation, scientists also involve local Panchayats, development agencies, NGOs and private organizations.

There is no provision of any budget in this program and the Institutes/universities have to provide facilities from their own resources."

G. AGRICULTURAL EDUCATION

2.73 Agricultural Education Division, through 02 Research Institutes and 1 All India Coordinated Research Projects, strives for maintaining and upgrading quality, relevance and strengthening of higher agricultural education through partnership with 73 Agricultural Universities (AUs) comprising of State Agricultural Universities (SAUs), ICAR Deemed-to-be-Universities (ICAR DUs), Central Agricultural University (CAU) and Central Universities (CUs) with Agriculture Faculty by providing support for student and faculty amenities and for holistic development of students. Under the major head Agricultural Education following allocations have been made during first three years against earmarked outlays of Rs.4000 crore for XIIth Plan:-

(Rs. in crore)

YEAR	BE	RE	AE
2012-13	583.00	426.00	513.03
2013-14	475.00	405.00	359.89
2014-15	561.20	380.00	374.75
2015-16	780.00	560.00	514.37
2016-17	600.00	650.40	402.68*
Total	2999.20	2421.4	2164.72*

2.74 On the query of the Committee about the reasons for allocations of only Rs. 2421.40 crore at RE stage, which works only 60.53 % of the XIIth plan earmarked outlays, the Department stated as under:-

"The reduction in the overall plan budget of the Division during the XII Plan has been, due to overall reduction in the Plan outlay of the ICAR/DARE by the Ministry of Finance. Accordingly, there has been a proportionate cut in the budget of the Division."

2.75 When asked about the proposals of the Department for funds for Agriculture Education during 2017-18, the Department stated as under:-

"An amount of Rs. 828.25 crores have been proposed by Agriculture Education division during 2017-18. (This includes Rs. 745.95 crores for Division & Rs. 82.30 crores for ESM.)"

2.76 On the query of the Committee regarding reasons for upward revision of Rs. 50 crore at RE stage during 2016-17, the Department stated as under:-

"An upward revision of Rs.50.00 crores has been made at the RE stage during 2016-17 for strengthening student and faculty amenities in AUs by promoting 'Green initiatives', ie., Governance' and implementation of 'Student READY' programme for sustainability in State Agricultural Universities (SAUs)/Central Agricultural Universities (CAUs)/Deemed-to-be-universities (DUs)/Central Universities with Agriculture faculty."

2.77 While stressing the limitation of funds for Agriculture Education Division, the Secretary of the Department during evidence submitted as under:

‘नए-नए महाविद्यालय और विश्वविद्यालय खोलने की बहुत सारी मांग आती हैं। उनको भी पूर्ण करना है। जो भी पहले से प्रावधान किया गया है, बजट डिक्लेरेशन के तहत किया गया है, उनके लिए भी प्रावधान करना है, आईआरआई झारखण्ड, आईआरआई असम है, उनके लिए भी प्रावधान करना है। उसमें अलग से प्रावधान नहीं है तो इसी पैसे में से खर्च करना है। इस हिसाब से पैसे बहुत कम हैं और जितना है, उसी के हिसाब से हम काम कर रहे हैं।’

2.78 On being enquired by the Committee about the impact of reduced allocation at RE stage on research work in Institutes under Agriculture Engineering Division, the Department stated as under:-

"In so far as the Agricultural Education Division is concerned, there is no cut imposed on the Institutes under Agriculture Education Division at RE

stage during 2016-17. As such, research was not affected by the reduced allocations."

ACCREDITATION SYSTEM FOR AGRICULTURE EDUCATION

2.79 The Department stated that Quality assurance in higher agricultural education is pursued through Accreditation of agricultural universities, their constituent colleges and programmes. National Agricultural Education Accreditation Board (NAEAB) has granted accreditation to six Agricultural Universities during current year.

2.80 On the query of the Committee regarding system in the country for accreditation of agriculture Universities/Institutes, the Department stated as under:-

"The accreditation process of agriculture Universities/Institutes in the country involves four steps, 1) The University/Institution submits self-study report providing how the university meets the criteria and the general institutional requirements, ii) Peer Review Team visits university/institution to validate the self-study report, iii) Submission of the self-study and peer team reports and also response from the Accreditation Board Secretariat to the Accreditation Board and iv) Final decision on the accreditation status of the institution by the Board. During the accreditation process, three tier accreditation system is followed: [a) University accreditation, b) College accreditation, and c) Individual academic programme accreditation]."

2.81 When enquired about periodic monitoring of quality of education being imparted in the agriculture institute in the country, the Department stated as under:-

"High level Committees are constituted periodically to monitor quality of education. Regular visits are arranged to check implementation of Dean's Committee. One recommendation is valid for 5 years."

2.82 When enquired about the policy for periodic evaluation of Professors/Research Scientists in agriculture institutes in the country, the Department stated as under:-

"The performance of Professors/research scientists in agriculture institutes in the country are being monitored by the Institute Research Committee (IRC) on half yearly and yearly basis. Apart from this there is a Research Advisory Committee (RAC) of each institute which reviews progress of research and provides advice on the direction and types of scientific aspects and methods /processes of research. The research programme of the institutes are subjected to quinquennial review through eminent experts in respective fields of science. The research Prioritization Management and Evaluation (PME) units of the institutes oversee the research planning and implementation processes. There are some other Performance Monitoring mechanisms such as Half Yearly Progress Monitoring (HYPM) and Project Information Management System (PIMS) for evaluation of scientists."

2.83 When the Committee enquired about the number of Agriculture Universities/ Research Institutes in the country which have secured position in global ranking, the Department stated as under:-

"So far, no university has secured position in global ranking."

2.84 On the query of the Committee regarding periodic evaluation of performance of Scientists under service conduct rules in ICAR institutes, the Department stated as under:-

"The performance of Scientists working in ICAR institutes are being evaluated on Half yearly and yearly basis by the Institute Research Committee. Evaluation of the scientists is also being carried out under Career Advancement Schemes for promotion to next higher grade, which is based on research merit of individual Scientist. At the age of 55 individuals are also evaluated for suitability in the service. Apart from this, the subject Matter Divisions (SMD) monitor and evaluate the research projects of the institute attached with concerned SMD."

2.85 On the query of the Committee regarding need of incorporation of courses on traditional farming methods, the representative of the Department submitted as under:

‘आपने एजुकेशन के बारे में बात की थी। यह बहुत अच्छी बात है, ट्रेडिशनल एग्रीकल्चर के बारे में कोर्सेज भी होने चाहिए और उस दिशा में हमारे कोर्स कन्टेंट अभी मोडिफाई हुए हैं, फिफ्थ डीन कमेटी रिपोर्ट अभी जमा हो गई है और लागू भी हो गई है। रिपोर्ट के मुताबिक उसमें कई पहलू पर हमारी एजुकेशन भी रहेगी, लेकिन अलग से कोर्स नहीं हैं एक आपने रूरल एग्रीकल्चर इकोनॉमी की बात की थी। यह बहुत अच्छी बात है, इकोनॉमीज तो स्टडी करते हैं, लेकिन एग्री इकोनॉमी, रूरल यानी गाँव की जो कृषि भित्तिक समस्याएँ हैं और उस पर आधारित जो इकोनॉमिक्स है, उसके ऊपर और शोध करने की आवश्यकता है। पढ़ाई में भी उसके ऊपर और बहुत कुछ करने की आवश्यकता है, हम कोर्स करिक्युलम में, जहाँ-जहाँ कमी होगी, हम उसे देखकर उसमें जरूर बदलाव करेंगे। यह जो बात हो रही थी, नोटिफिकेशन और अपग्रेडेशन ऑफ, जो हमारी ट्रेडिशनल नॉलेज है, माननीय सदस्यों ऑर्गेनिक फार्मिंग के बारे में भी बात की थी।’

2.86 Further elaborating on the steps taken by the ICAR to reorient agriculture education courses in the country, the representative of the Department submitted as under:

‘महोदय, जैसा कि हमारे महानिदेशक महोदय ने बताया, उसी संदर्भ में मैं आपके समक्ष प्रस्तुत करना चाहूंगा। हर विषय में हमारी अधिष्ठाता स्तर की कमेटी बनी थी। स्नातक स्तर के जितने भी कोर्सेस हैं, उनमें 11 ऐसे कोर्सेस हैं, जिसमें कृषि मुख्य है, दूसरा उद्यानिकी है, तीसरा वानिकी है, फिर कृषि अभियांत्रिकी है, फिर हमारी डेयरी टेक्नॉलोजी है, फूड टेक्नॉलोजी है, मात्स्यिकी है। इसी तरह गृह विज्ञान है। हमने गृह विज्ञान का बदलाव कर दिया है। उसकी जगह हमने सामुदायिक विज्ञान रखा है। इस तरह से हमारे कुल 11 विषय हैं, जिनमें हम स्नातक स्तर पर डिग्री देते

हैं। पिछले दो सालों से हमने इसके ऊपर एक्सरसाइज किया है। हमने पहले डीन्स कमेटी बनाई। हमारे भारत देश में 73 कृषि विश्वविद्यालय हैं और 368 एक्स्टेंडिड कॉलेजेज हैं, जिनमें से ज्यादातर जो कॉलेजेज हैं, वे कृषि पर आधारित हैं। दूसरे स्तर पर हॉर्टिकल्चर के आते हैं। इस तरीके से हमने 15-15 अधिष्ठाताओं को लेकर पिछले दो सालों में पूरी एक्सरसाइज की और प्रधानमंत्री कार्यालय से हमें चार शब्द दिए गए थे कि कृषि में हम इन चार शब्दों को समावेश करें। पहला शब्द उन्होंने दिया था - ट्रेडिशनल। जैसा आपने फरमाया, यह वही है कि किस तरह से हमारी प्रारंभिक कृषि थी।'

प्रथम वर्ष में हमने जितने भी कोर्सेज लिए हैं, वे ट्रेडिशनल टेक्नॉलोजी के लिए हैं। हमने छात्रों को यह जानकारी देने की कोशिश की है कि उसमें हमारी योग्यता क्या थी और हमारा अनुभव क्या था।

प्रधानमंत्री कार्यालय से हमें दूसरा शब्द दिया गया था कि हम अपनी टेक्नॉलोजी को इन्क्लूड करें। हमारे भारतीय स्तर पर जो टेक्नॉलोजी उपलब्ध है, हमने उनको भी लिया और अन्तरराष्ट्रीय स्तर पर जो प्रौद्योगिकी उपलब्ध हैं, उन सबका इसमें समावेश किया गया है। तृतीय वर्ष में हमने टैलेन्ट पर बल दिया है कि किस तरह से हम अपने छात्रों का टैलेन्ट बढ़ाएं। आज के वर्तमान परिप्रेक्ष्य में जो कृषि है, उसमें काफी बदलाव आ गया है। जैसे संरक्षित कृषि है, द्वितीयक कृषि है, जिसमें कि प्रोसेसिंग एण्ड वैल्यू एडिशन आता है। इसी तरह से, हाइटेक कल्टीवेशन, स्पेशिलिटी एग्रीकल्चर हैं।

हमने तृतीय वर्ष में कुछ ऐसे कोर्सेज का समावेश किया है, जिससे कि छात्रों की योग्यता बढ़े और वे इस तरह के कार्य करें, ताकि उन्हें जितना भी तरह का ज्ञान है और जितने तरह का कौशल उन्हें उपलब्ध है, उससे वह अपने टैलेन्ट को बढ़ाएं।

मैं आप सबको यह जानकारी देना चाहूंगा कि हमने चौथे वर्ष में कोई भी कोर्स नहीं रखा है और पूरा का पूरा 12 महीने हमने स्टूडेंट रेडी प्रोग्राम लगाया है। आर.ई.ए.डी.वाई. (रेडी) का मतलब है - रूरल इंटरप्रेन्योरशिप अवेयरनेस डेवलपमेंट योजना। इसके अन्तर्गत हम यह चाहते हैं कि अंतिम वर्ष के हमारे छात्र उद्यमी बनें। उनमें हम ट्रेडिंग का कॉन्सेप्ट लाएं। उसमें हमने पांच विभिन्न कॉम्पोनेंट्स को रखा है। पहला कॉम्पोनेंट है एक्सपीरियेंशल लर्निंग यानी जितना भी ज्ञान उन्होंने प्रथम, द्वितीय और तृतीय वर्ष में लिया है, चौथे वर्ष में तीन या चार महीने तक एक्सपीरियेंसल लर्निंग का यानी कि उससे संबंधित इस तरह के 626 एक्सपीरियेंसल लर्निंग यूनिट्स हमने सारे 368 कॉलेजेज में लगाए हैं, यानी कि हर कॉलेज में लगभग दो यूनिट्स लगाए हैं। यहां छात्र खुद अपने स्तर से बाजार से या गांवों से सामग्री लेकर आएंगे और फिर खुद उसको प्रोसेस करेगा, उसमें वैल्यू एडिशन करेगा और उसकी मार्केटिंग भी करेगा। इसके लिए हमने हर विश्वविद्यालय से यह अनुरोध किया है कि आप एक तरह का आउट-ले भी बनाएं।

दूसरा, हमने इसमें मुख्य आयाम यह रखा है कि वर्तमान में 1,268 एग्रो इंडस्ट्रीज हैं, जो संगठित सेक्टर में भी हैं और एम.एन.सीज. भी हैं, जिनमें हमारे कम्युनिटी बोर्ड्स भी आते हैं, हमने अलग-अलग तारीखों में इनकी मीटिंग रखकर हमने इनके साथ एक एम.ओ.यू. साइन किया, जिससे हमारे छात्र उन संस्थाओं में भी जाएं और वहां से ज्ञान लाएं, जिसे हमने 'इन-प्लान्ट ट्रेनिंग' कहा है और इंडस्ट्री अटैचमेंट का नाम दिया है। तीन या चार महीने छात्र नेस्ले, अमूल जैसी कंपनियों में जाएगा और वहां सीखेगा। इसी तरह से ट्रैक्टर की मैनुफैक्चरिंग की 24 कंपनियां हैं और जो दूसरे इंप्लीमेंट्स हैं, उनकी 600 के करीब ऑरगेनाइज्ड सेक्टर्स हैं, उनसे जोड़ने की भी हमने कोशिश की है। इसके साथ-साथ हमने एक आयाम और रखा है, आर.ए.डब्ल्यू.ई. (रावे) का हमने विस्तृत रूप दिया है। रावे का मतलब है - रूरल

एग्रीकल्चर वर्क एक्सपीरियंस। हम यह चाहते हैं कि हमारे छात्र प्रथम, द्वितीय एवं तृतीय वर्ष के ज्ञान को लेकर वे इतने निपुण हो जाएं कि चौथे वर्ष में वे किसानों के साथ रहें और उनकी समस्याओं को देख कर उनको हल बताएं। पहले यह होता था कि केवल वे किसानों की समस्याएं लेकर आते थे। पर, हमारा कोर्स सिलेबस इतनी अच्छी तरह से बनाया गया है कि उसमें करीब 62% प्रैक्टिकल है और इस कारण से मुझे बड़ी खुशी हो रही है कि हमारे मंत्रालय ने हमारे कृषि संकाय के जितने भी 11 विषय हैं, इन सबको भी प्रोफेशनल डिग्री यानी व्यावसायिक शिक्षा घोषित कर दिया है। हमारे हर कोर्स में करीब 62% और किसी में 63%, जैसे कृषि अभियांत्रिकी में 67% प्रैक्टिकल है। हम यही चाहते हैं।

स्टूडेंट डेयरी प्रोग्राम में आखिरी आयाम जो है, वह है स्टूडेंट प्रोजेक्ट, यानी कि कुछ छात्र ऐसे भी होते हैं जो उच्च शिक्षा की तरफ जाते हैं, ताकि वे कोई प्रॉब्लम आइडेंटिफाई करें, उसके लिए एक्सपेरिमेंटल सेट-अप करें, उसकी थीसिस लिखें। इस तरह, कुछ ज्ञान इसके लिए भी दिया गया है। ये सारी चीज़ें हमने की है।’

PART-II

OBSERVATIONS/RECOMMENDATIONS OF THE COMMITTEE

NEED FOR OPTIMUM UTILIZATION OF FUNDS

1. The Committee note that the Government has done away with the distinction between Plan and Non Plan funds and adopted the system of presenting a combined budget of each head as per revised structure w.e.f. 2017-18. The Committee were informed that annual Accounts of ICAR are being prepared strictly as per the guidelines of C&AG for autonomous bodies. The Revenue and Capital expenditure are distinctly depicted in the Accounts. According to the Department, introduction of new system of presentation of budget will bring higher efficiency and optimal utilization of allocated funds due to reduced codal formalities. The Committee express their sense of satisfaction about the current changes in process of budgeting by doing away with distinction between Plan and Non-Plan funds and advancing the date for presentation of budget. The Committee hope that these changes will simplify the process of accounting and expenditure control mechanism, reduction of codal formalities etc. thereby optimizing the utilization of allocated funds. Parliamentary approval to Demands for Grants before the start of next fiscal and availability of funds at the beginning of financial year will also help the Department for timely planning and execution of research. The Committee hope that DARE/ICAR will strengthen their system to take maximum benefits out of these changes and fully utilize allocated funds. The Committee also desire the Department to take an overview of existing procedure

for approval of funds for projects, tendering process and procurement system and undertake necessary changes in order to minimize the time gap between approval and execution of projects/Research.

2. The Committee note that only 69.43 % (BE) funds were allocated to the DARE/ICAR as against earmarked outlays of Rs.25553.00 crore during XII plan. The BE allocations were further drastically reduced at RE stage and DARE/ICAR got only 53.95 % of earmarked outlays during entire XII plan. The Committee also observe that the Department failed to fully utilize funds under plan head during 2015-16 as only Rs. 2735.32 crore were utilized as against RE allocations of Rs. 3000 crore. The same trend has been observed during entire XII plan as the Department utilized only Rs. 10992.31 crore i.e. 79.73% as against RE allocations of Rs. 13786.58 crore under plan head till December, 2016. The Committee are not convinced with the reasons put forward by the Government such as involvement of several agencies, time consuming codal formalities/ procedures, seeking the preliminary estimates, tendering of proposals for equipment, vetting by Director works, concurrence/ interventions of the Internal Finance, approval of the competent authority and finally placement of orders for procurements/ going ahead with constructions, failure of supplying firms/ construction agencies to supply the articles/ initiation of constructions on time , review of proposal due to reduction of allocations at RE stage etc. accounted for failure of Department to fully utilize allocated funds. The Committee note with concern that same reasons are cited year after year to justify the failure of the Ministry to fully utilize the allocated funds. The Committee desire the Ministry to

review the entire system and look into the constraints or causes for under-utilization of funds during the previous years and make concerted and coordinated efforts to make full use of allocated funds.

NEED FOR ADEQUATE ALLOCATION OF FUNDS FOR RESEARCH WORK

3. The Committee note that a sum of Rs. 6800.00 crore has been allocated to the Department as against proposal of Rs. 7665.48 crore for the financial year 2017-18. The Committee observe that allocation during current fiscal are only 9.01 % higher than combined RE allocations to the Department during 2016-17. The Committee also observe that major amount of funds available to the DARE/ICAR are utilized for payment of salary. The Committee were informed that around 14 per cent of the total R&D expenditure of the Union Government is on agricultural research and education, and more than half of ICAR budget is spent on SAUs, KVKs and AICRPs. The representative of DARE/ICAR submitted during the sitting that Rs. 4200 crore out of allocations of Rs. 6800 crore during 2017-18 will be utilized under the head of salary/pension and Department has been left only with limited funds for research after payment of salary/pension, KVKs and education. The Committee are of view that there is need for huge investment in the agricultural research and education sector and extension services if the Government wants to achieve the aim of doubling the income of farmers in the country by 2022. However, the Committee are distressed to note that there is stagnation in the allocations to these sectors as over a period of time the share of annual allocation to the DARE/ICARs with respect to corresponding Agricultural

GDP (at current prices) is oscillating between 0.3 to 0.4 %. The Committee in their earlier reports had stressed on allocations of around 1 % of agricultural GDP to the DARE/ICAR in order to transform the agriculture research sector. The Committee, therefore, reiterate their earlier recommendation and urge the Government to enhance allocations to the DARE/ICAR during current fiscal and future so that various research projects/ related programmes undertaken by the Department do not suffer for want of funds and target of 4% annual growth in agriculture sector could be accomplished without any constraints.

FINANCIAL IRREGULARITIES

4. The Committee note that 5 cases of financial irregularities were reported in the Institutes of ICAR to the DARE during 2015-16 and 2016-17. The Committee further note that ICAR has initiated necessary proceedings under relevant conduct rules in all cases. The Committee were informed that ICAR has strengthened the internal audit system and they regularly interact with authorities in various ICAR institutes to prevent irregularities. The Committee hope that the strict vigil will be maintained by ICAR in future and desire that the Department should make provisions for time bound completion of inquiry.

GENERATION OF INTERNAL REVENUE

5. The Committee note that the Institutes of ICAR generate significant revenue from copyrights, sale of seeds/ planting materials /vaccines, consultancy/training services etc. The Committee were informed that ICAR institutes utilized revenue

of Rs. 733.66 crore during 2012-16. The Committee are of view that there is need of enhancing internal revenue generation from ICAR Institutes. There is huge market for hybrid seeds, crop varieties, agricultural machineries, vaccines, dairy formulations etc. developed by the ICAR institutes within the country and abroad which are yet to be explored. The Committee, therefore, recommend the Department to take steps for availability of all ICAR products and services on a single platform and make it accessible and cost effective in order to maximize revenue from intellectual properties available with vast network of ICAR Institutes. The Committee desire the Department to make it mandatory to channelize services of all ICAR institutes through a single platform. The Committee also expect from the Department to take steps to make Agrinnovate more vibrant and market savvy.

CROP SCIENCE DIVISION

6. The Committee note that Crop Science Division is engaged in the development of improved crop varieties/hybrids, cost effective production and environment friendly crop protection technologies to enhance crop productions and ensure food and nutritional security in the Country through a network of 17 Research Institutes, 03 Bureaux, 02 National Research Centres, 04 Project Directorates, 22 All India Coordinated Research Projects and 11 Network Research Projects. The Committee were informed that the 265 field crop varieties and hybrids out of 698 varieties released during XII Plan have been commercialized till date and currently are under seed chain. The Committee were further informed that

awareness campaign are conducted among farmers about new crop varieties and hybrids through nationwide Front Line Demonstrations (FLDs), on and off farm trainings, skill development program by the ICAR institutes, State Agricultural Universities (SAUs) and Krishi Vigyan Kendras (KVKs). However, the Committee regret to note only Rs. 2512.75 crore were allocated at BE stage as against earmarked outlays of Rs. 4141.31 crore for XII plan under the head Crop Science which works out only 60.97 %. This amount was further reduced to Rs. 2099.66 crore at RE stage. However, the Committee are distressed to note that the Division could utilize only Rs. 1938.49 crore till December 2016. The budget estimates to the Division during 2017-18 is only Rs.1486.58 crore as against Rs. 1639.10 crore proposed by the Division.

According to the Department, the division has made efforts to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of 12th plan period. The Department has also made more efforts to achieve the set physical targets and set its priorities according to the available funds. While appreciating the efforts of the Division, the Committee are of the opinion that drastic cut in plan allocation of funds to the extent of 39% as against the earmarked outlays of Rs 4141.39 crore for 12th plan would bound to affect adversely the implementation of various activities/programmes of the Division. The Committee, therefore, desire the Department to impress upon the Ministry of Finance for adequate allocations of funds as proposed by them to the division at RE stage in the current fiscal so that all activities/programmes undertaken by them may run smoothly and effectively with a view to achieve the

planned physical and financial targets. The Committee would like to be apprised of the initiatives undertaken by the Department in this regard. The Committee also desire that a mechanism may be put in place in ICAR to monitor activities/programmes of the Division so as to ensure timely and optimum utilization of allocated funds for this purpose.

HORTICULTURE SCIENCE DIVISION

7. The Committee note that Horticulture Science Division under ICAR coordinates and monitors the research programs in the country with the network of 12 Research Institutes, 06 National Research Centres, 05 Project Directorates, 10 All India Coordinated Research Projects and 02 Network Research Projects for technological development in enhancing the horticulture crop productivity through science led growth in the sector. The Committee were informed that the Division have notified 115 varieties of horticultural crops during the period of 2014-16. Further, 52 varieties of vegetable and spices were also notified during the last five years. However, the Committee are constrained to note that only Rs. 778.35 crore i.e. 54.74 % out of earmarked outlays of Rs. 1422 crore for the XII plan was allocated to the division at RE stage. Nevertheless, for 2017-18, the combined allocations of Rs. 602.65 crore have been made to the Division which is 13.95 % higher than the combined allocations i.e. Rs. 528.27 crore made at RE stage during 2016-17. In its explanation, the Department informed that funds are allocated to different division on the basis of overall allocations received by the DARE/ICAR from the M/o Finance at BE and RE stage. Every year, the M/o Finance had reduced the allocation of DARE/ICAR. This has resulted in

proportionate reduction to various Divisions at RE state, which is the prime reason for significant cut in the allocation of Horticulture Science Division for the entire 12th plan period. The Committee are of the opinion that a significant cut in the plan allocation adversely affect the smooth and effective implementation of the various activities/programmes and achievements of planned targets. The Committee, therefore, recommend that the Department may pursue the matter with M/o Finance for allocation of adequate funds at RE stage so as to ensure that various activities/programmes of the Division do not suffer for want of funds.

The Committee also note that India imports a lot of agricultural and allied products from other countries. The total agricultural and allied products imports of the Country has increased from Rs. 70165 crore during 2011-12 to Rs. 139934 crore during 2015-16. As a result, the share of agriculture import in total import in the country has increased from 2.99 % in 2011-12 to 5.63 % during 2015-16. The Committee further observe that vegetable oils, pulses, fresh fruits, cashew, spices and sugar are some of the major agricultural commodities in terms of value which were imported in the country during the said period. The Committee recall that ICAR has started major research efforts to develop improved varieties of pulses to increase their production in the country. The Committee were also informed that ICAR has initiated work to develop local varieties of exotic vegetables and fruits such as cape gooseberry, peppeno, rambuttan, dragon fruits, mangosteen, sweet carambola, durian, pulasan, jackfruit, broccoli, Chinese cabbage, lettuce and English cucumber. However, the Committee are surprised to know that ICAR has not taken steps for research on development of local

varieties of olive, almond, walnut etc. The ICAR has also failed to develop improved varieties of oil seeds which can bring revolution in oil seed production in the Country. The Committee are of considered opinion that demands for agriculture products in the country is bound to change significantly with changing dietary pattern associated with rising income and impact of globalization, necessitating import and thereby, causing strain on foreign exchange . The Committee are of the view that there is need for enhancing production of agriculture products which are currently being imported. The Committee, therefore, recommend that a detailed study to find ways to enhance production of these agriculture produce in different agro-climatic zones and sub-zones in the country be conducted. The Committee also recommend the ICAR to start a special research project for development of local varieties of dry fruits, spices, olive etc. which are currently being imported in the country. The Committee also recommend the Government to allocate additional funds to the ICAR for this purpose. The Committee would like to be apprised of the initiatives undertaken by the Department in this regard.

NATURAL RESOURCES MANAGEMENT DIVISION

8. The Committee note that Natural Research Management (NRA) Division of ICAR is engaged in developing location-specific, cost effective and eco-friendly technologies for conservation and management of natural resources through the network of 12 Research Institutes, 01 Bureau, 01 National Research Centre, 01 Project Directorate, 10 All India Coordinated Research Projects and 02 Network Research Projects in the country. The Committee observe that only Rs. 1339.5

crore i.e. 61.34 % of earmarked outlays for the XII plan were allocated to the Division at RE stage. The Committee also note that the combined allocations of Rs. 732.17 crore have been made to the Division for 2017-18 as against Rs. 890.96 crore as proposed by the Department during 2017-18. Needless to say, the drastic cut in the plan allocation has its adverse impact on various activities/research projects undertaken by the NRM division. The Committee, therefore, recommend that plan allocation made to the Division may be reviewed at RE stage and the matter may be taken up with the M/o Finance at RE stage for allocation of adequate funds at RE stage so as to ensure effective and efficient implementation of its various activities/research programmes.

The Committee note that NRM Division is engaged in research programmes in the field of organic farming. The Committee note that 5.71million Hectare area including 1.49 million Hectare and 4.22 million hectare forest and wild area for collection of minor forest produces is under organic certification in the country. The Committee were informed that ICAR is developing technologies and low cost manure under Network Project on Organic Farming to reduce the cost of production of crops. The Committee were also informed that conversion period of shift from chemical fertilizer based to organic farming ranges between 2-4 years in high intensive areas depending on the soils and 0-2 years in hilly and rain fed areas for different crops. However, research done by the ICAR shows that addition of more legumes in the systems (intercropping and 2 legume crops in a year) and addition of low nutrient requiring crops in the rotation are helpful in reducing the conversion period. The Committee further note that ICAR is working

for establishment of separate institute for organic farming. However, the Committee are distressed to note that ICAR or any other Government agencies have not undertaken any study to assess the market for organic agricultural products in domestic and international market.

The Committee appreciates the efforts made by the ICAR for research on organic farming. Nevertheless, the Committee are of the view that organic farming is one of the areas where farmers of our country are at advantage due to their traditional knowledge and limited use of fertilizer. Better marketing of organic agriculture products can be useful in achieving the aim of doubling the income of farmers in the country. However, there is need to provide a fillip to traditional knowledge of farmers through infusion of technology, provision of cost effective green manure and reduction of conversion time. The Committee, therefore, recommend the Department to gear their scientific prowess to start a new era of farming based on sustainable use of natural resources. The Committee also desire the Department to constitute a specific cell in every ICAR institute and KVK for organic farming wherein, consultation services and accesses to developed technologies, green manure, plant materials, agronomic methods may be provided to the farmers at a reasonable cost. The Committee appreciate the efforts made by the ICAR for research on organic farming. The Committee also expect the Department to expedite the process of submission of EFC for establishment of an independent Institute for organic farming so that it can be operationalized within minimum possible time. Further, the Committee also desire that ICAR or any other agencies would also be entrusted to conduct a

study to assess the market for organic agricultural products in domestic and international market so as to enable them, to plan organic farming in the Country so as to meet the demand of domestic and international market. The Committee would like to be apprised of the initiatives undertaken by them in this regard.

ANIMAL SCIENCE DIVISION

9. The Committee note that Animal Science Division of ICAR coordinates and monitors research programmes for sustainable enhancement of productivity and improvement in health status of livestock and poultry in the country through its 10 Research Institutes, 01 Bureau, 06 National Research Centres, 02 Project Directorates, 07 All India Coordinated Research Projects and 08 Network Research Project. The Committee observe that only Rs. 970.98 crore i.e. 62.93 % of earmarked outlays of Rs.1543.00 crore for the XII plan were allocated to the Division at RE stage. The Committee also note that combined allocations of Rs. 885.77 crore have been made to the Division against Rs. 1001.35 crore as proposed by the Department during 2017-18. The Committee are of the opinion that adequate funds need to be provided to the division so that activities/research/programmes undertaken by the Division are not hindered for want of adequate funds. The Committee, therefore, recommend that the allocation of funds to the Division may be reviewed at RE stage and the matter may be pursued with M/o Finance in this regard.

The Committee note that Animal Science Division is involved in research on development and production of vaccine for various diseases of animal. The

Committee were informed that ICAR institutes are engaged in development of gene deleted IBR vaccine, which will be DIVA capable, DIVA enabled mutant Brucella vaccine strain, Johne's disease vaccine, 3A and 3B epitope deletion mutant of FMDV to explore marker vaccine potential, infectious cDNA clone for a serotype Asia 1 and O FMD virus and many other vaccines. The Committee further observe that production of animal vaccine is woefully short of requirement in the country. The Committee were informed that vaccine production of Foot and Mouth disease vaccine, swine fever vaccine, PPR Vaccine, Sheep pox vaccine is only 400 million doses/year, 0.7 million doses/year, 160 million doses/year and 31 million doses/year respectively which is quite low as against requirement of 1022 million doses/year, 10 million doses/year, 200 million doses/year and 65 million doses/year respectively. The Committee are of the view that there is an urgent need for adequate facility and availability of animal vaccine in the country to fully utilize potential of milk, meat and wool from cattle and other animals which are largest in numbers in entire world. The Committee desire the ICAR to take a detailed study on the ways by which production of animal vaccine may be enhanced to make the country self reliant. The Committee also desire the ICAR to devote adequate resources and man power for development of animal vaccines in which the country lacks necessary technology.

FISHERIES SCIENCE DIVISION

10. The Committee note that Fisheries Science Division under ICAR is undertaking research and academic programmes in fisheries and aquaculture sector in the country through the network of 06 Research Institutes, 01 Bureau, 01 Project Directorates. however, the Committee note that Division were allocated only 48.98 % (RE) of the plan of earmarked outlays of Rs. 735.00 crore for XII Plan. The Committee were informed that the overall reduction in the Plan outlay of the ICAR/DARE by Ministry of Finance led to a proportionate cut in the budget of the Fisheries Science Division. However, the Committee were assured that funds made available to the Division at RE stage were judiciously distributed among the on-going Plan Schemes depending on their priorities, to ensure that the on-going research priorities are addressed smoothly and efficiently. The Committee further note that combined allocations to the division during 2017-18 is only Rs. 446.69 which is 12.48 % higher that allocations available to the division at RE stage during 2016-17. The Committee are of view that apart from providing important and cheap source of protein for vast majority of our countrymen, fishery sector is one of largest sector for employment generation in the country. There is need for large investment in research and development in the sector so that scientist can solve problems being faced by the fisherman in the country. The Committee, therefore, recommend the Government to enhance allocations to the Division at RE stage during current and coming fiscal to bolster the sector in the country.

AGRICULTURAL ENGINEERING DIVISION

11. The Committee note that Agricultural Engineering Division through its 05 Research Institutes, 06 All India Coordinated Research Projects and 02 Network Research Projects mandated to plan, coordinate, and monitor R&D programmes and serve as an information repository in Agricultural Engineering to make Indian agriculture profitable, sustainable and globally competitive enterprise through engineering interventions. The Committee observe that only Rs. 332.00 crore i.e. 30.18 % of earmarked outlays of Rs.1100.00 crore for the XII plan were allocated to the division at RE stage. The Committee also note that combined allocations of Rs. 213.54 crore were made to the Division for 2017-18 against an amount of Rs. 255.91 crore as proposed by the Division during 2017-18. While appreciating the efforts of the Division to ensure that activities/programmes of high priority do not suffer due to reduced allocations during the various years of the 12th Plan, the Committee are of the view that non-availability of funds as proposed by the Department adversely impact the various activities undertaken by the Division. The Committee, therefore, recommend that the Department may taken up the matter with Ministry of Finance and urge them to allocate funds as per their demand.

The Committee note that Agricultural Engineering Division is involved in development and demonstration of technologies related to mechanization of production and post-production agriculture using conventional and non-conventional energy sources and includes mechanization of irrigation and drainage activities; post-harvest and value addition of agricultural products and

by products. The Committee were informed that Institutes under the Division have developed locally suitable thirteen technologies related to seeding, planting, plant protection, harvesting, threshing etc. The Committee were also informed that 239 technologies/farm equipments/machine have been developed by the different institutes during the XII plan. The Committee also note that Institutes under the division were able to commercialize 118 these thirteen technologies related to seeding, planting, plant protection, harvesting, threshing etc. Besides, technologies and protocols pertaining to post harvest loss reduction and value addition, renewable energy for agriculture and irrigation have also been developed and were able to generate revenue of Rs. 3.15 crore during XII Plan. However, the Committee are surprised to know that the ICAR does not maintain information regarding import of agricultural machineries and tools in the country. The Committee observe that farming practice of the country is witnessing a gradual shift to the mechanization due to shortage of farm labour, necessitating availability of efficient and cost effective farm equipments and machineries. The Committee also observe that farmers of the country require small and efficient farm equipment due to small and fragmented size of land holdings. The Committee are of the considered view that easy availability of advanced, cost effective and small farm machineries suitable for small and fragmented land holdings will radically transform agriculture by cutting expenses and thereby enhancing income of the farmers in the country. The Committee, therefore, recommend the Department to analyze the availability and use of agriculture machineries in technologically advanced countries and trend of import of these

machineries in the country. The Committee also recommend the ICAR to start a dedicated mission for development of advanced agriculture machineries keeping in view the requirement of farmers in the country.

AGRICULTURE EXTENSION

12. The Committee note that ICAR has established a network of 665 Krishi Vigyan Kendra (KVKs) in the country aiming at technology assessment and demonstration for its application and capacity development. Provision of extension services to farmers in the Country is done by the main extension system operated by State Governments. The Department of Agriculture, Cooperation and Farmers Welfare has provided support to States for setting up of Agricultural Technology Management Agency (ATMA) aiming at making extension system farmer driven and farmer accountable by way of new institutional arrangements for technology dissemination at district level. ATMA Scheme is under implementation in 652 districts in 29 States and 3 UTs in the country with provision for active participation of farmers/farmer-groups, NGOs, KVK, Panchayati Raj Institutions and other stakeholders operating at district level and below. However, the Committee note that allocations for KVKs are not sufficient enough to provide them all necessary infrastructure and manpower. Only Rs. 2998.36 crore were allocated for KVKs scheme at RE stage which works out 76.88% of the approved outlays of Rs.3900 crore for the XII plan. The Committee also note that allocations of Rs. 867.60 crore for KVKs scheme during 2017-18 is not sufficient to meet obligations under the scheme and Department will need additional requirement of Rs.200.00 crore during current fiscal. The

Committee in their previous reports had time and again emphasized for allocation of adequate resources for implementation of KVKs scheme to strengthen the system of agriculture extension in the country. The Committee are of the considered view that KVKs due to their linkage with vast network of ICAR institute can be effectively leveraged for dissemination of information about crop varieties and hybrids, technologies, machineries, dairy management practices etc. among farmers in the country and to create a group of progressive farmers who can act as trainers for downward dissemination of these knowledge. The Committee, therefore urge the M/o Finance to allocate additional funds as required by the ICAR for the KVKs scheme at RE stage.

The Committee note that KVK scheme is wholly funded by the Government of India. The Committee were informed that ICAR did not explore the possibilities for accessing the funds available under Corporate Social Responsibility (CSR) of Public/private companies registered in the Country funds for providing necessary infrastructure and equipment to the KVKs scheme. The Committee are of the view that funds available under Corporate Social Responsibility with Public/private companies as mandated by the recently amended Company Act can be effectively utilized for provision of necessary infrastructure, equipments and other facilities in KVKs. The Committee, therefore, recommend the ICAR to make a proposal for tapping the CSR funds for KVKs scheme and approach various Public/private companies either directly or through their representative bodies such as FICCI, ASSOCHAM etc. after obtaining necessary approval. The Committee would like to be apprised of the initiatives undertaken by the Department/ICAR in this regard.

The Committee note that various initiatives under KVK scheme have been undertaken such as Mera Gaon Mera Gaurav (MGMG) and Farmer FIRST Programme (FFP) and Attracting and Retaining Youth in Agriculture (ARYA) during 12th plan. The Farmer FIRST Programme (FFP) aims at increased farmers – scientist interface for enriching knowledge and integrating technology for field application and Mera Gaon Mera Gaurav (MGMG) aims to encourage agriculture scientists to adopt villages and give suitable advice to the farmers on technical and other related aspects in a time frame through personal visits or on telephone. While appreciating these initiatives of ICAR, the Committee are of the view that that current system of agriculture extension support system needs to be reoriented according to the needs of the farmers keeping in view their socio-economic conditions and the mental ability to understand and adapt the new technologies and practice for sustained growth in agriculture sector. The Committee, therefore, recommend that the existing system of agriculture extension services in the entire country may be reviewed and reoriented and to make it more effective and accessible to the farmers in the Country in coordination and consultation with all stakeholders including State Governments to elicit their views. The Committee would like to be apprised of the initiatives undertaken by the Department/ICAR in this regard.

Since 2015-16, Attracting and Retaining Youth in Agriculture (ARYA) is being implemented in 25 States through KVKs with an objective to attract and empower the youth in rural areas to take up various agriculture and allied enterprises for sustainable income and gainful employment in selected districts.

The Committee were also informed that one district from each State with technical partners from ICAR Institutes and Agricultural Universities for taking up entrepreneurial activities through skill development of rural youth. However, the Committee note that meager allocation of Rs. 2 crore and Rs. 7 crore were made during 2015-16 and 2016-17 respectively. The Committee are of the view that farming sector as a whole is unable to attract the young talent, thereby, affecting income of the farmers in entire country primarily due to lack of entrepreneurship in the field of agriculture. The Committee observe that several private companies have successfully combined the agriculture extension services and agriculture marketing in various parts of the country. The Committee desire the ICAR to study the system of these companies and other such initiatives taken in the private sectors either in the country or abroad and analyze as to in what ways these can be utilized for attracting youth for entrepreneurial startups in the field of agriculture. The Committee also desire the ICAR to take steps for enhancing awareness among farming community and youth in rural areas for taking benefits under 'Startup India' Initiatives of the Government of India in the field of agriculture. The Committee also recommend the Government to enhance allocations to the ARYA scheme to widen its reach among rural youth in the entire Country.

AGRICULTURAL EDUCATION DIVISION

13. The Committee note that Agricultural Education Division strives for maintaining and upgrading quality, relevance and strengthening of higher agricultural education through 02 Research Institutes and 1 All India Coordinated

Research Projects in partnership with 73 Agricultural Universities (AUs) comprising of State Agricultural Universities (SAUs), ICAR Deemed-to-be-Universities (ICAR DUs), Central Agricultural University (CAU) and Central Universities (CUs) with Agriculture Faculty by providing support for student and faculty amenities and for holistic development of students. The Committee NOTE that only Rs. 2421.40 crore i.e. 60.53 % of earmarked outlays of Rs.4000 crore for the XII plan were allocated to the division at RE stage. The Committee also note that combined allocations of Rs. 805.95 (Rs. 736.71 for Agriculture Education and Rs. 69.24 crore for ESM) were made to the Division against an amount of Rs. 828.25 crore as proposed during 2017-18. The Committee were informed during oral evidence that ICAR will face limitation of funds in current financial year as no separate provision of funds has been made for IARI, Jharkhand and Assam. The Committee are of the considered view that investment in agriculture education sector may yield rich dividends in terms of generation of generation of skilled manpower and may encourage research and innovations in the field of agriculture which may, in turn, induce faster improvement in socio-economic conditions of poor and marginal farmers of the Country. The Committee, therefore, urge the Ministry of Finance to suitably enhance the allocation to the Department so that they do not face financial constraints in providing resources to the agriculture education institutes in the country including for establishment of new agricultural universities and research initiatives in the Country.

The Committee note that National Agricultural Education Accreditation Board (NAEAB) under ICAR is empowered to grant accreditation Agricultural

Institutes/Universities in the country. The Committee were also informed that ICAR also has a system of Institute Research Committee (IRC) for periodic evaluation (half yearly and yearly basis) of Professors/Research scientists in agriculture institutes in the country. Research Advisory Committee (RAC) of each institute which reviews progress of research and provides advice on the direction and types of scientific aspects and methods /processes of research. The research programme of the institutes are subjected to quinquennial review through eminent experts in respective fields of science. However, the Committee are surprised to know that none of Agriculture Universities/ Research Institutes in the country has secured position in global ranking. The Committee are of view that there is need of comparative analysis of agriculture education system of the country with other successful countries in the field and take corrective steps to improve the academic and research performance of agricultural institute in the country so that they can secure high global ranking. The Committee desire the ICAR to identify agriculture institutes in the country which have potential to compete at the global level and to provide necessary support to them in the form of necessary funds and infrastructure.

The Committee note that ICAR has made significant changes in the course curriculum for agriculture to include learning on traditional agriculture and rural agriculture economy. The Committee also note that experiential learning in the farmers field has also been included in the course curriculum under Rural Entrepreneurship Awareness Development Programme (READY) for final year students. The Committee are of the view that there is lack of professional help to

the farmers in the country due to limitation of traditional agriculture extension system and inclusion of course content on rural agriculture economy, traditional methods of farming and experiential learning in the village with farmers will help to create an informed pool of students who may create a revolution with their entrepreneurial and innovative research projects. The Committee, therefore, appreciate these steps of ICAR for making agriculture education beneficial for the country. The Committee also desire the ICAR to explore possibilities for designing short term certificate courses/vocational courses after class 10/12 standard which can help to create a pool of agriculture foot soldiers in the country who may in turn provide professional support to the farmers in guiding them to increase their production and productivity of crops efficiently and effectively.

NEW DELHI;
09 March, 2017
18 Phalguna, 1938 (Saka)

HUKM DEO NARAYAN YADAV
Chairperson,
Standing Committee on Agriculture

**ANNEXURES WILL
BE UPLOADED
LATER ON**

STANDING COMMITTEE ON AGRICULTURE

(2016-17)

MINUTES OF THE ELEVENTH SITTING OF THE COMMITTEE

The Committee sat on Thursday, the 16th February, 2017 from 1400 hours to 1600 hours in Room No. '53', Parliament House, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS

LOK SABHA

2. Shri Nalin Kumar Kateel
3. Dr. Tapas Mandal
4. Shri Janardan Mishra
5. Shri Devji Mansingram Patel
6. Shri Nityanand Rai
7. Shri Neiphiu Rio
8. Shri Satyapal Singh (Sambhal)
9. Shri Jai Prakash Narayan Yadav

RAJYA SABHA

10. Shri Sambhaji Chhatrapati
11. Sardar Sukhdev Singh Dhindsa
12. Shri Janardan Dwivedi
13. Shri Vinay Katiyar
14. Shri Mohd. Ali Khan
15. Shri Ram Nath Thakur
16. Shri Shankarbhai N.Vegad

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Shri U.B.S.Negi | - | Joint Secretary |
| 2. | Shri Arun K. Kaushik | - | Director |
| 2. | Smt.Juby Amar | - | Additional Director |
| 3. | Shri Sumesh Kumar | - | Under Secretary |

LIST OF WITNESSES

MINISTRY OF AGRICULTURE & FARMERS WELFARE **(DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION, ICAR)**

<u>S.No.</u>	<u>NAME OF THE OFFICER</u>	<u>DESIGNATION</u>
1.	Dr. Trilochan Mohapatra	Secretary (DARE) & DG (ICAR)
2.	Shri Sunil Kumar Singh	Addl. Secretary & FA, DARE/ICAR
3.	Shri Chhabilendra Roul	Addl. Secretary (DARE) & Secretary (ICAR)
4.	Dr. K. Alagusundaram	DDG (A.Engg.)
5.	Dr. A.K. Singh	DDG (Ag. Extn.)
6.	Dr. Jeet Singh Sandhu	DDG (CS)
7.	Dr. Narendra Singh Rathore	DDG (Edn.)
8.	Dr. Habibur Rahman	DDG (AS)
9.	Dr. Joykrushna Jenna	DDG (Fy.Sc.)
10.	Dr. A.K. Vasisht	ADG (PIM)
11.	Dr. B.S. Prakash	ADG (ANP)
12.	Dr. Rameshwar Singh	PD, DKMA
13.	Dr. Pawan Kumar Agrawal	ADG (NASF)
14.	Dr. R.K. Singh	ADG (CC)
15.	Dr. Sanjeev Saxena	ADG (IPTM & PME)

2

. At the outset, the Chairperson welcomed the Members of the Committee to the sitting convened for examination of 'Demands for Grants (2017-18)' of the Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education). Thereafter, the representatives of the Ministry were

ushered in. After welcoming the representatives, the Chairperson apprised them of the provisions of the Directions 55 (1) of the 'Directions by the Speaker, Lok Sabha' regarding confidentiality of the proceedings and asked them to give their introduction.

3. After the introduction, the Committee raised several issues/points which have been briefly mentioned below and sought opinion of the Department on the same:-

- I. Achievements of ICAR during XII plan and preparation for 15 year long term perspective plan and short term action plan for making Indian Agriculture sustainable and growth oriented;
- II. Strategy for doubling the income of farmers by 2022;
- III. Plan for reducing revenue expenditure along with enhancing funds for research activities in ICAR;
- IV. Reasons for failure of the Department to fully utilize funds allocated;
- V. Need to include courses on traditional rural economy, traditional agricultural knowledge and traditional agricultural implements in curriculum for agriculture sciences;
- VI. steps taken by the Department in cases of financial irregularities in ICAR institutes;
- VII. Reason for failure of the Department to fill the vacancies for ADG (Horticulture);
- VIII. Need to develop small, cost effective and low energy intensive farm machineries suitable for small and fragmented land holdings ;
- IX. Need to make menthol farming cost effective; and
- X. Steps taken by the ICAR for development of improved and cost effective organic manure.

4. The Representatives of the Department responded to most of the queries raised by the Members. The Chairperson then thanked the witnesses for sharing valuable information with the Committee on the subject and directed them to send, in writing, the

requisite information in points, which was not readily available with them to the Secretariat at the earliest.

5. A copy of the verbatim proceedings of the sitting has been kept separately.

The Committee then adjourned.

STANDING COMMITTEE ON AGRICULTURE

(2016-17)

MINUTES OF THE FIFTEENTH SITTING OF THE COMMITTEE

The Committee sat on Friday, the 09th March, 2017 from 1000 hrs. to 1050 hrs. in the Chamber of the Hon'ble Chairperson, Standing Committee on Agriculture, Room No. 138 (Third Floor), Parliament House, New Delhi.

PRESENT

Shri Hukm Deo Narayan Yadav – Chairperson

MEMBERS

LOK SABHA

02. Shri Nalin Kumar Kateel
03. Md. Badaruddoza Khan
04. Shri C. Mahendran
05. Shri Janardan Mishra
06. Shri Devji Patel
07. Shri Mukesh Rajput
08. Shri Neiphiu Rio
09. Shri Konakalla Narayana Rao
10. Shri C.L. Ruala
11. Shri Satyapal Singh (Sambhal)

RAJYA SABHA

12. Shri Sambhaji Chhatrapati
13. Shri Meghraj Jain
14. Shri Mohd. Ali Khan
15. Shri Ram Nath Thakur
16. Shri Darshan Singh Yadav

SECRETARIAT

- | | | | |
|----|----------------------|---|---------------------|
| 1. | Shri U.B.S. Negi | – | Joint Secretary |
| 2. | Shri Arun K. Kaushik | – | Director |
| 3. | Smt. Juby Amar | – | Additional Director |
| 4. | Shri C. Vanlalruata | – | Deputy Secretary |
| 5. | Shri Sumesh Kumar | – | Under Secretary |

2. At the outset, Chairperson welcomed the Members to the Sitting of the Committee. Thereafter, the Committee took up for consideration the following draft Reports:

*(i) xxxxxx xxxxxx xxxxxx xxxxxxx

(ii) Draft Report on Demands for Grants (2017-18) pertaining to the Ministry of Agriculture and Farmers Welfare (Department of Agricultural Research and Education).

*(iii) xxxxxx xxxxxx xxxxxx xxxxxxx

3. After some deliberations, the Committee adopted the draft Reports without any modifications and authorized the Chairperson to finalize and present these Reports to Parliament.

The Committee then adjourned.

***Matter not related to this Report.**